SCOTTISH EDUCATION DEPARTMENT

From School to Further Education

REPORT OF A WORKING PARTY
ON THE LINKAGE OF SECONDARY AND
FURTHER EDUCATION

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§ Retired on 30th Septemher, 1962.

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The Rt. Hon. M. A. C. Noble, M.P.
Secretary of State for Scotland.

SIR,

INTRODUCTION

1. Following an announcement in the White Paper of January, 1961, " Technical Education in Scotland: The Pattern for the Future " (Cmnd. 1245), we were appointed by your predecessor in office as a Working Party with the following terms of reference:

> " To consider means of improving the arrangements for co-ordinating the later stages of secondary courses and the earlier stages of courses of vocational further education, with particular reference to the educational needs, both vocational and general, of these young people who either do not follow or do not complete courses leading to the Scottish Certificate of Education; and to make recommendations."

2. The field of investigation suggested by this remit is a wide and complex one in which many educational bodies are interested and involved. It was very desirable for as many as possible of these bodies to have a direct part in our deliberations and this was arranged, although it meant that our membership had to be made fairly large. Broad as was the range of experience within our ranks, however, we did not feel it to be broad enough, and we therefore sought to supplement it and to secure as much information and advice as possible by consulting a large number of practising teachers from both secondary schools and colleges of further education in many parts of the country, as well as representatives of the teacher training system; no fewer than 36 teachers came to tell us personally of their experience and to give us their views, and 54 more submitted written memoranda. In addition, we have interviewed a wide variety of men and women from industry and commerce, and representatives both of the British Employers' Confederation and of the Scottish Trade Union Congress. We should like to express our sincere thanks to all those individuals who have helped us in these ways. We have also had the advantage of receiving and studying a considerable number of memoranda from the Scottish Education Department and the Central Youth Employment Executive, as well as a good deal of material reproduced from educational and other publications and many official reports and pamphlets. The task of conducting the interviews and considering the many memoranda proved a very lengthy one, but we have no doubt of its value in giving us a greater understanding of and a deeper sympathy with the problems involved and in suggesting views and ideas which we have subsequently found very useful in formulating our thoughts. Several of our members were also able from their own experience to advise us on aspects of the situation in England and Wales and in some Western European countries which seemed relevant to our field of study.

3. After general discussion of the methods we should adopt in dealing with our remit, we formed six sub-committees to study and advise us on the co-ordination of secondary with further education within the context of six main groups of

occupations—agriculture and fishing, building, commerce and retail distribution, engineering, girls' occupations and unskilled work. The sub-committees co-opted several experts in their respective fields, interviewed individuals from many parts of the country and, in addition to visiting schools and colleges, paid visits to a number of factories and offices to observe the type of work undertaken by young people. They received full co-operation from the firms visited and had useful discussions with management staff, besides informal talks with the young employees. We should like to express our grateful thanks to all those who rendered such valuable assistance to these sub-committees.

4. At a later stage two additional sub-committees were formed to advise us on the question of examinations for pupils below the level of the new Ordinary grade of the Scottish Certificate of Education, and on the form of a school leaving record which would convey to youth employment officers and college principals adequate and relevant information about young school leavers.

5. After having held 32 meetings of the main Working Party, we now have the honour to submit this unanimous report. Sections I to III of our report deal with the background to the main problem. Sections IV to X deal in detail with the levels on which co-ordination can be effected and the means by which we think it should be achieved. In Section XI we discuss improvements in staffing and in the training of teachers which would be required to give full effect to our recommendations, and in Section XII we look ahead to the far-reaching changes which appear likely to come in the field of the education and training of young people.

I. The Scope of the Problem

6. The Education (Scotland) Act of 1946, by requiring that secondary education should be provided for all, created a new situation for the secondary schools. Hitherto they had catered for the abler minority; now they were required to receive all boys and girls over the age of twelve, at all levels of ability, and to provide for them a suitable secondary education. During the past fifteen years many teachers have made real efforts to study the needs of their pupils and to send them out reasonably prepared for life. These efforts have, not unnaturally, been much more successful in some schools than in others; later on in our report we shall study what has been done and shall endeavour to suggest means of effecting improvement. In the meantime we are concerned to note two facts: that all young people between the ages of, roughly, twelve and fifteen receive an organised secondary education, and that for many of them this is in present circumstances the last form of organised education which they receive.

7. The Act of 1946 envisaged at least some form of part-time further education for all young people up to the age of eighteen; but circumstances have prevented the implementation of this part of the Act, and further education still remains on a voluntary basis. Whether an individual undertakes any further education or not after leaving school depends very largely on his own interest, foresight or ambition, or on the attitude of his employer and the requirements of his job. The result has been that very many have undertaken no further education, and most of those who have done so have been obliged to proceed through voluntary evening study. Over Scottish industry and commerce as a whole, disappointingly few young workers are granted day-release by their employers for day-time

study. It is true that certain employers have consistently shown an interest in further education, and there are now signs of increasing interest among others; but the general lack of support from industry has undoubtedly hampered development. The need to give more young people at all levels the benefit of further education has, however, been emphasised by the social and, in particular, the economic trends of today, and it is now more important than ever before to develop in full measure the ability available in the community. In modern conditions of increasing competition, industrial communities like our own depend for their prosperity on higher productivity and efficiency in industry and commerce, where rapid changes have resulted from scientific and technological advances. Those advances which have already taken place have led to changes in existing skills and the emergence of new ones and their general effect has been to raise the level of skill required in industry as a whole. If this requirement of better standards in industry is not matched by an improvement in the general level of education among those in employment, the application of further technological developments will almost certainly be delayed by the lack of trained personnel; and the shortage of trained personnel may well keep progress below what, from the nation's standpoint, is desirable. The need at most levels for skilled manpower, with a background of broad and systematic education and training, is now therefore urgent.

8. The part which further education has to play is an important one, for experience has shown that it is through courses of further education that the young worker can deepen his knowledge, widen his vision and learn to do his job with greater efficiency and understanding. But the structure of further education nowadays is much more complicated than it used to be. In the past, and even the recent past, a substantial number of boys and girls of high ability left school as soon as they were permitted by statute to do so; many of them became apprentices and, through time, skilled craftsmen, and the needs of industry for skilled workers, which were relatively limited at that time, were largely satisfied in this way. The number of young people of superior ability who are remaining at school is now increasing steadily; the supply of very able workers " on the shop floor " is as a consequence diminishing at the same time as the needs of industry are increasing and becoming greatly diversified, and courses have to be devised which are suited to young people of more limited abilities than in the past. In existing circumstances the use made of further education courses in schemes of training depends very largely on the attitude of industry and commerce towards them. Facilities for the courses are another factor, but where there is evidence of definite support from local employers for particular courses, education authorities are invariably willing to make the necessary provision, either in their own areas or by co-operation with neighbouring areas.

9. The number of courses in further education is already increasing and will continue to increase. The success of further education depends, however, to no small extent on the kind of preparation which has been given in the secondary school, and it is now urgent to secure effective co-ordination of secondary education with further education, and to make sure that the transition from one to the other is as smooth as possible. As a general rule these two stages of education have developed quite separately and have remained too far apart; few deliberate attempts have been made to co-ordinate them, and these have tended to be sporadic and confined to a few particular localities. A previous Working Party, in its Report on the Curriculum of the Senior Secondary School,

made a number of recommendations—which authorities were subsequently asked to adopt—for the building of bridges between secondary courses leading to the Scottish Certificate of Education and courses at appropriate levels in further education. The difficulties of establishing similar links are, however, more formidable in the case of young people who have not taken Certificate courses in school; they form the large majority of each age group, they are of lesser ability and they enter a very wide variety of occupations.

10. The traditional Scottish secondary school course was one designed to provide a broad general education with a distinct academic bias and suitable, in the main, as a preparation for the professions; and this tradition was to a large extent continued in the expanded secondary education of the years after the war. In further education, on the other hand, particularly in the technical and commercial fields, vocational requirements very largely determine the content and influence the treatment of the various subjects of study. The aims of these two stages being thus so fundamentally different, there has been a basic tendency for them to remain dissociated. The problems involved in the growth and diversification of each of them have generally absorbed the energies of teachers in schools and colleges and of administrators to such an extent that little attention has been devoted to the desirability of co-ordinating them, and the distinction between them has hardened. As a result, there now exist two groups of teachers, one in schools and one in colleges, who have far less knowledge of each other's work than is necessary and desirable. This ignorance has in turn led to widespread apathy towards any attempts at appreciating each other's views, extending, in some cases, to prejudice. Secondary school teachers have full-time professional training behind them and usually have had little or no direct experience of the world of industry and commerce; on the other hand, a substantial proportion of the teachers in colleges who are in contact with young people below the Scottish Certificate of Education level have gained their technical qualifications through part-time further education and have had fairly extensive industrial experience. These differences in their backgrounds doubtless go some way towards explaining the present lack of community of interest.

11. Some education authorities and individual head teachers and principals have shown themselves alive to the need for co-ordination of interest and have set about achieving it in different ways. In one or two localities groups of teachers drawn from schools and colleges have planned jointly courses as a whole and syllabuses in individual subjects; in some cases information and advice have been sought from head teachers and used in the selection of students for pre-employment courses; and conferences of teachers from schools and colleges have been held now and again to discuss common problems. These instances of collaboration are, however, relatively rare, and over Scotland as a whole co-operation and consultation are far from being sufficiently comprehensive or well-organised.

12. This outline of the main reasons for the present separation of secondary and further education throws into relief the difficulties in the way of achieving close and systematic co-ordination. The bringing together of the two stages must depend ultimately on a community of interest and a sympathetic understanding among a wide range of people in the home, the school, the further education establishment, the Youth Employment Service, industry and commerce.

II. The Young People Involved: their Characteristics, Occupations and Education

Proportion of age group

13. Over the country as a whole, some 35 per cent of the boys and girls in an age group are transferred each year to courses of secondary education leading to presentation on either the Ordinary or the Higher grade of the Scottish Certificate of Education. Our interest lies mainly, therefore, with the boys and girls, upwards of 50,000 every year, who comprise the remaining 65 per cent of the age group. This section of the age group includes young people who are above average in ability and are capable of considerable intellectual effort and of substantial attainment in a fairly wide field. It also includes boys and girls whose abilities will enable them to make only limited progress in a very restricted field which is closely related to practical pursuits. Between these two extremes, there is a large number of boys and girls who have the capacity to make good progress in suitably designed courses in school and, later, to acquire a high level of skill and an understanding of the practical techniques of industry and commerce.

Characteristics and attitudes

14. The educational background of these boys and girls when they enter the secondary school is often not conducive to success. The very fact that they have been allocated to courses that do not lead to the Scottish Certificate of Education is sometimes interpreted by members of the general public, and by the young people themselves, as a mark of failure. Some of them, because their experience in the primary school has been largely one of failure, have given up the effort to succeed, and a few may be passively or actively antagonistic to the discipline and work of the school. Nevertheless, with the resilience of their age, they are prepared to start anew in the secondary school and to respond with enthusiasm and renewed effort to the teacher who offers them success, even on a modest scale. The teacher who is most likely to evoke this response and to achieve success with them is one who has studied them and understands their characteristics and attitudes. As a general rule, they are not interested in academic learning and prefer physical activity to thinking; their mental activity is stimulated by real things and happenings in the physical world rather than by ideas and concepts. Though generalisations appeal less readily to them than to their abler fellows, they have nevertheless some ability to generalise from particular illustrations. The less their ability, the less well do they meet demands for sustained effort; they respond best to tasks which yield quick results, and most of them do not look far ahead. Generally, too, the less their ability, the less self-sufficient do they feel and the more dependent they are on the companionship and good opinion of their fellows. They like best to work in small groups or teams. As the time for leaving school draws nearer, most of them, although no long-term vocational desire may yet have matured, begin to look outwards from the school to the excitements soon to be met in the adult world of work. They regard with new interest their friends who not so long ago left school and who now seem to lead a much freer life with much more money to spend. It is not perhaps surprising that to many of the pupils school, especially if they have as yet achieved little joy or success in it, becomes positively irksome. If interest is to be maintained and enthusiasm aroused at this stage in school

life it appears essential that the secondary school should take account of this outward look and the approach to adulthood and employment.

Secondary education: aims, and means of achieving them

15. We have already drawn attention to the very great change which took place in the secondary school when it became obligatory for all pupils to receive a secondary education. The academic type of education which was traditional, and not unsuitable, for the relatively small and able minority of pupils who entered secondary schools in earlier days was not appropriate to large numbers of the boys and girls who entered these schools after 1947, and teachers found themselves faced with the problem of devising new types of education. In an endeavour to focus thought on this problem and to encourage the development of suitable secondary school courses for the new types of pupil, the Scottish Education Department published, in 1955, a memorandum, " Junior Secondary Education," which stated the broad aims of secondary education and suggested in some detail the type of work which was appropriate for pupils who were not following courses leading to the Scottish Leaving Certificate. As an essential part of the background to our report, we give a brief account of these aims and of the means suggested for achieving them as they were stated in the memorandum.

16. The aims are very broad; they emphasise the all-round development of the individual pupil and assume that his education should not be concerned merely with intellectual attainment but should aim at character building in the widest sense, should include a substantial element of social and aesthetic training and should give due attention to emotional and physical well-being. The young person has at each stage of his development interests and needs which are peculiar to, and should largely determine, his education at that stage. There comes a time, however, when the pupil looks forward to his future life as a young worker and a member of an adult society. It is at this stage that his interest in an occupation makes the inclusion of a vocational elemeut in his general course of study both natural and desirable. He will, however, be more than a worker after he leaves school, and his interest in activities which will later enable him to use his leisure hours profitably should therefore be aroused and developed as fully as possible.

17. To achieve its aims, the school has at its disposal the content of its curriculum, the methods it uses for teaching and learning, its corporate life and its contacts with the community which it serves. The curriculum normally includes a wide variety of subjects each of which makes its own contribution to the sum of the knowledge and experience which all pupils require. These subjects should not, however, be taught in isolation from each other but should be linked and correlated as fully as possible. All pupils should not be expected to study each subject as widely or fully as their fellows; the amount of ground to be covered should be carefully graded in accordance with their abilities. Methods of teaching should be designed to take account of individual capabilities and qualities, to inject purpose into the pupils' work by applying it to real life situations, to use natural interests as a motivating force, and to place pupils in situations where they will learn new facts and skills and will develop qualities of character by their own efforts. Visual, aural and other aids to teaching should play an important part in these methods. Carefully planned and conducted corporate activities such as morning assembly, a variety of social functions, clubs and

societies should make school more than a mere place of learning for the pupils and should contribute significantly to the attainment of its aims. Close relations with the community of which the school is part are essential; much of the material that illustrates the lessons should from the beginning be drawn from the social and industrial affairs of the locality and many of the applications of subjects should be seen in the local environment. The involvement of parents in the affairs of the school and in their children's education is of great importance; without their co-operation it is difficult for the school to achieve its purpose. If young people are to be induced to continue their education after school and if their vocational interests and aspirations are to be dealt with satisfactorily, the school, the home, the Youth Employment Service, local industry and further education must work in harmony.

Recent developments

18. Many teachers have made a real effort to give effect to the recommendations of the memorandum. Development has, however, been patchy and uneven over the country as a whole. Progress has been made on a wide front in certain areas; on the other hand, in others, both rural and urban, relatively few schools have varied at all substantially the old academic approach to secondary education. The lack of any real development in these schools is in sharp contrast to the progressive thinking in others where the curriculum has been widened to include, in the later stages, courses centred on vocational interests, such as engineering, building, retail distribution, agriculture, catering and nursing, or where a new approach to teaching has been adopted. All those who have spoken to us about the response of pupils to these newer types of course and newer approaches have emphasised the enthusiasm and the all-round increase in effort which have been evoked and have reported substantial improvement in the general behaviour of the pupils, in their attitude towards the work of the school and in their standard of general education. Activity in the development of the corporate life of the schools and in fostering pursuits which are usually regarded as extra-curricular has increased rapidly in recent years and is now of major importance in many schools; some prepare their pupils successfully for participation in some aspects of the Duke of Edinburgh's Award Scheme. A growing number, but still a disappointingly small number, of schools are providing courses, generally with a vocational motive, in a fourth year. All the evidence suggests that this additional year of full-time education provides benefits for the pupils far exceeding anything that is found possible in a three-year course.

19. The relative lack of success achieved at present by many schools in the education of ordinary boys and girls at the secondary stage must surely point to some weakness in the schools themselves. In too many of our schools children are still being forced into a pattern of existing courses with established goals and those who do not fit the existing pattern are regarded as failures. In the experience of many teachers a boy (or a girl) who has hitherto shown little ability to read or to express himself in speech or in writing will show an immediate desire to acquire these skills if he is presented with interests which seem of such value to him that he cannot otherwise develop them. What is, in fact, being done in the newer types of course to which we have referred above is to provide a meaningful incentive and thereby to create in the pupils a desire to equip themselves with the necessary language and the necessary ability to use language and to improve their basic command of essentials, so that their

progress in the work which appears meaningful to them may not be hampered. What is required is that the schools should act much more as instruments for the development of the talent which undoubtedly exists in them and which, while it is not responsive to traditional methods, can be nurtured by means which take account of other than verbal or purely intellectual abilities.

20. There have, of course, been many obstacles in the way of progress. Few schools have not suffered from shortages of staff; even where the total number of teachers has been, on the whole, sufficient, the continuity of instruction has often been disturbed by a rapid turnover. Though many schools are housed in new buildings with ample accommodation there are others in which overcrowded and makeshift premises have hampered progress. Not all teachers have found it possible to adapt themselves adequately to a conception of teaching for which their training and their previous experience had provided insufficient preparation. Classes of forty pupils or more with diverse ability, attainment, attitude and temperament are not uncommon; they have tended to increase greatly the practical difficulties of teaching by the methods that are now considered appropriate. Discipline and general problems of behaviour have overshadowed much of the work attempted in the schools. The causes of behavioural problems are many and varied and are frequently beyond the control of the school; they often, however, reflect faulty curricula, methods of teaching and learning based inappropriately on the academic tradition, and over-rigid insistence on somewhat artificial standards of conduct. Many pupils throughout the country unfortunately find little satisfaction in their schooling and leave school without having had the benefit of the kind of secondary education which would have suited them best.

Need for continued education

21. The great majority of boys and girls who do not follow courses leading to the Scottish Certificate of Education leave school on the first school leaving date after their fifteenth birthday; some remain to complete their three-year course and a few continue their full-time education for a fourth year in school or in college of further education. No matter how well the schools may perform their task, boys and girls who leave school at the age of fifteen (or even sixteen) are not fully developed intellectually, emotionally, socially or physically; nor can their further development be left safely to chance. They are at a stage when a well-balanced education may be expected to enhance greatly their qualities as individuals, citizens and workers. It is important that their education should continue on a broad front.

Nature of occupations

22. As we have already remarked, the further education undertaken by many young people is to a large extent determined by the occupations they are engaged in. It is therefore relevant to consider the occupations taken up by boys and girls when they leave school and, at the same time, the nature and extent of the facilities available for their further education. Information supplied to us by the Central Youth Employment Executive shows that about two-thirds of the boys entering employment between the ages of fifteen and eighteen are engaged in a few major industries: the distributive trades take up more than 25 per cent.; engineering and associated industries 20 per cent.; building 10 per cent.; agriculture and fishing 10 per cent. Of the girl entrants, the distributive

trades employ almost 40 per cent. and the textile and clothing industries together recruit more than 20 per cent. The remaining boys and girls are employed in diverse occupations in numerous smaller industries. In rural and seaboard areas, a substantial proportion of the boys turn to agriculture, fishing and other marine occupations for a living; otherwise, the pattern of employment in these areas is similar to that in urban districts, both boys and girls travelling to local villages and towns for work in shops, factories, offices and catering establishments.

23. Of young people under the age of eighteen employed in the various industries, some 40 per cent. are engaged in clerical work or as apprentices and learners in skilled occupations which require extensive practical training and further education. On the industrial side, over 30 per cent. of the boys, but only 6 per cent. of the girls, enter on skilled trades of one kind or another. On the commercial side, the position is almost exactly reversed, over 30 per cent. of the entrants being girls and only 7 per cent. boys. The remaining boys and girls, some 60 per cent. of the new entrants to industry and commerce, find employment in jobs which are commonly regarded as unskilled or semi-skilled. Some element of skill is, however, needed nowadays in almost all occupations, and the training required by these young workers varies considerably from job to job: in some, a short period of training within industry, without technical education, may be sufficient; in others, periods of one, two or three years of training, together with technical courses in a college, may be required.

Developing needs in industry

24. Different occupations make different demands not only on manual skills and intellectual capacity, but, because of the different conditions of work which they impose, also on temperament and personal qualities. The industrial scene is constantly changing. Some old industries are contracting and being replaced by new ones, scientific and technical advances are being more widely applied, and automated processes are now more widely used in factory, workshop and office. In consequence, different and more diversified occupations are open to young people, and the number of skilled and semi-skilled jobs is increasing. More and more occupations are demanding flexibility and adaptability in the application of skills and more jobs require for their efficient performance some understanding of the technical operations involved. This is true not only in the industrial field but also in commerce, where a large expansion of employment is taking place in several occupations at a level which makes new demands on employees. The retail trades, for example, are increasingly looking for a better educated recruit who will neither, on the one hand, be a mere errand boy nor, on the other, be expected to acquire an encyclopaedic knowledge of the products he sells, but will be more capable of understanding and reacting effectively to the human situation in which he finds himself. These developments are still at a relatively early stage in this country, but the trend is quite clear and the demands which it presupposes can be met only through the provision of suitable education both in school and after school.

Need for extension of day release

25. Since the end of the war, vigorous efforts have been made to increase the number of young people who continue their education after they leave school, and, in particular, to induce many more employers to grant day release to their

young employees; and these efforts must obviously be continued with even greater intensity. Only about 10 per cent. of boys and 2 per cent. of girls under the age of eighteen are granted day release by their employers to attend vocational courses of further education. Thirty-five per cent. of boys and girls, in almost equal numbers, attend evening classes, 25 per cent. in vocational courses of one kind or another and 10 per cent. in non-vocational courses. In addition, boys and girls between the ages of fifteen and sixteen, again almost in equal numbers, go directly from school to a variety of pre-employment courses in further education; they make up less than 10 per cent. of all new entrants to industry and commerce and are mainly found in courses in engineering, building and commerce.

26. We are very anxious that the efforts to persuade employers to grant day release to young recruits to industry and commerce should meet with success. In our view, no young person can be expected to obtain the best advantage from part-time further education which comes entirely at the end of a full and tiring day's work, and it seems regrettable that there are still employers who are content to encourage their young employees to attend evening classes when suitable day classes are available. It is unfortunately true that no suitable day classes are available in some areas, and some employers who would be willing to follow an enlightened policy find that they have no alternative to the encouragement of evening attendance. Fortunately, the opening of new technical colleges is reducing and will soon largely remove the deficiencies.

27. We would point out that girls can give valuable service in a much wider variety of jobs than has so far been open to them, and that they, no less than boys, require day release for further education. Employers are often unwilling to incur expenditure on the training of girls which will not yield a full return before the girls leave on marrying or shortly after marriage. We have been assured, however, by employers whom we have questioned, that their outlay on the further education of girls has yielded a fair return. Moreover, many married women return later to industry or commerce, and the training they have received before marriage is therefore by no means entirely lost.

Provision of further education for industry and commerce

28. Until fairly recently, technical further education through part-time courses took place mainly in the evening in secondary school premises where facilities for practical work were at best meagre and, as a result, courses of a practical nature for craftsmen tended to be neglected. Workshop facilities are now being provided in technical colleges on an increasing scale, and many courses with a practical bias, based on syllabuses and examinations of the City and Guilds of London Institute, have been introduced into Scottish colleges. Altogether the Institute has available for introduction, wherever a demand arises, syllabuses and examination arrangements for more than 200 different courses; of these, more than 120 have been introduced in Scotland to cover a wide range of occupations in mechanical, electrical, chemical and mining engineering, building, textile and clothing manufacture, distribution, catering and food, agriculture and printing. These courses take into account the general capabilities and aptitudes required by each grade of worker in each of the various occupations and are provided at three broad levels of ability.

(i) In general, courses for *operatives* make very limited demands on academic ability and attainment; they are planned not only to increase the

young worker's skill in operating machinery and plant, but to give them an opportunity to improve their general education.

(ii) Basic craft courses are offered to the average *craft apprentice* who, if he proceeds no further with his studies, is likely to remain in the craft grade all his working life. These courses are designed to improve craft skill through better understanding of materials and processes and to promote a higher standard of general and social education. The basic craft course may be extended in some cases to the advanced craft level.

(iii) The ablest apprentices among the boys with whom we are concerned might take a *technician's* course which, though still biased towards a practical skill, calls for some academic ability. Apprentices who qualify in a technician's course form the group from which candidates for posts of responsibility on the practical side of industry are likely to be drawn. Any apprentice may progress from the basic craft course to the final stages of the technician's course provided he has the requisite aptitude, ability and perseverance.

Not all occupations have courses at several levels associated with them, but the number is increasing as industry defines the different grades of worker appropriate to each occupation.

29. The provision of formal further education, especially for boys, was in the past largely confined to National Certificate courses. Many of those who began these courses did not have the requisite ability or aptitude and failed in the early stages; as a consequence they gave up their National Certificate course and in most cases abandoned at the same time all thought of continuing their formal further education. The wastage from this source was very large—in one recent year in the West of Scotland region, for example, of 8,000 students in the preliminary and first year stages of National Certificate courses no fewer than 7,000 had given up by the end of the session. Under the new conditions of entry to National Certificate courses—normally three specified passes on the Ordinary grade of the Scottish Certificate of Education—this source of wastage should be largely eliminated. Many young people who would formerly have failed in the early stages of National Certificate courses are now being enrolled in the more appropriate operative, craft and technician courses which are being provided by the City and Guilds of London Institute, and are being encouraged by their progress to complete them.

30. Courses in commerce are associated with the syllabuses and examinations of the recently constituted Scottish Council for Commercial Education and of other examining bodies such as the Royal Society of Arts. Some of them, such as those leading to the Scottish Council's Clerk Typist Certificate, Shorthand Typist Certificate and Secretarial Certificate, and Stage I of the Royal Society of Arts examinations in English, arithmetic, principles of accounts and typewriting, come within the scope of only the ablest young people who do not follow Scottish Certificate of Education courses at school. The needs of the large number of young people of average ability who perform a diversity of specialised office tasks other than typing will be met through part-time courses leading to the Council's Scottish Certificate in Office Studies and the various endorsements on it. A Retail Distributive Trades Junior Course (Scotland) has been designed specifically by the City and Guilds of London Institute for young workers in retail distribution in Scotland.

31. In addition to technical and commercial courses which lead to certificates of national or wider status, courses designed to meet local conditions are

offered at various centres throughout the country. Not infrequently, these courses duplicate, though perhaps at a different level, courses of the more widely recognised examining bodies. Certain firms organise further education for their own employees in specially designed courses either in local education authority centres or, assisted by teachers seconded by the local authority, on their own premises.

32. In a few colleges, courses of a more general nature have been devised for young workers whose occupations do not require specific technical or commercial education. Various courses of this type are offered to abler young people from certain branches of the public service, as well as to factory hands and other relatively unskilled workers; they are providing valuable experience in the further education of young people whose occupations do not call for vocational education in a narrow sense.

33. Courses of the pre-employment type in colleges of further education provide an alternative full-time education for boys and girls over the age of fifteen who do not elect to remain at school. These courses are centred on a vocational purpose which may be of a fairly broad nature, as in engineering and certain aspects of building, or be quite specific, as in nursing and commerce. Courses of this type are provided also in agriculture, baking and catering, tailoring, textiles, distributive trades, navigation, fish processing, hairdressing and shipbuilding. They usually include a fairly substantial element of general education and are of considerable benefit to the students even though they may eventually enter occupations unconnected with the pre-employment course they have taken.

The part to be played by employers

34. Twenty-four new colleges of further education and thirty-five major extensions to existing colleges will soon be in use, and there will, as a consequence, be a very substantial increase in the number of student places in courses at the levels with which we are concerned, as well as a great improvement in the standard of the facilities offered. We have already commented on the increase in the number of occupations which have associated with them courses suitable for different grades of workers. Educational preparations are therefore well advanced; a more general acceptance by employers of the principle of day release is now needed if the majority of young workers are to receive further education appropriate to their occupations and their abilities.

Training for industry

35. A distinction is generally drawn between "vocational further education," which is regarded as providing the broad background needed for any skill and is the responsibility of the education service, and "industrial training," which develops the practical skills and is left to the employer to provide. In practice, there is no hard and fast line between the two spheres; some practical skills, such as typewriting, are developed in educational establishments, while there are certain firms whose works schools provide technical education as well as practical training. In most cases, however, the young trainee obtains his training and education from two separate sources; and all too often his employer and his college make little attempt to find out what the other is doing, or to relate

together their respective contributions. A few colleges are now trying to meet this difficulty by providing full-time courses for the first year of apprenticeship, in which technical education is fully integrated with systematic basic training of a kind which many smaller firms are not equipped to give.

36. It is relevant at this point to draw attention to certain features of technical training and education in other Western European countries. Differences between the British system and those on the Continent arise out of differences in general educational practice, industrial practice and apprenticeship customs. Apprenticeships in other European countries tend to be on much more specialised lines and are generally shorter by two years. In these countries great stress is laid on general education in both full-time and part-time craft courses and an apprentice usually has to pass a terminal trade test before he is granted the status of a journeyman, and may even be prevented from taking up craft employment if he does not possess a certificate of proficiency. In some countries practice in respect of girls is very different from British practice; girls take up a substantial proportion of all skilled apprenticeships and are given the same training facilities and privileges as boys. There is now more than a possibility, following on the presentation to Parliament by the Minister of Labour, in December, 1962, of a White Paper: " Industrial Training: Government Proposals " (Cmnd. 1892), that our system of industrial training will undergo a profound series of changes which may, among other things, introduce some of features which are at present characteristic of some Western European systems.

37. The White Paper sets out in broad outline proposals which, amended as necessary and filled out in the light of discussions between the Government and the various interests concerned, will be embodied in legislation designed to make sure that arrangements for industrial training will match present-day needs. The prospect of effective action in this field is very much to be welcomed. The measures to be introduced initially will no doubt be directed against the most damaging weaknesses in present arrangements, but we can discern the emergence of a framework capable of being strengthened and expanded so as to yield ultimately a comprehensive scheme for the vocational training and education of all young workers and for their related training and education as young citizens.

38. As our deliberations have proceeded, we have as a group become completely convinced that it is vital for the education provided for the young people covered by our remit to be closely related to their vocational interest, prospective or actual. We cannot conceive of an elightened programme of industrial training with which a complementary educational programme is not closely associated and we therefore envisage that, as new schemes are adopted or existing ones improved, there will be a corresponding increase in the number of students granted release from employment to attend courses of further education. It would seem to us essential that, when schemes of industrial training and the corresponding schemes for the complementary technical and general education are being devised, this should not be done in two separate operations but should be treated as a joint enterprise by industry and education. These developments will not of themselves necessarily introduce new types of problems of co-ordination of the work of schools with that of colleges of further education, but they will assuredly make it more imperative than ever that the co-ordination should be effective.

III. What Industry, Commerce and Further Education Ask of the Schools

THE NEED FOR VOCATIONAL GUIDANCE IN SCHOOL

39. When a young person leaves school and enrols in a part-time or full-time course of formal further education, the nature of the course and the level of study are largely determined by his actual or prospective occupation. It is important for his future progress and happiness that he should find his chosen occupation congenial and that he should have not only the general capacity to meet its demands hut the ability to understand and to absorb the technical education associated with it. These conditions are most likely to he satisfied if hoys and girls receive proper vocational guidance in school and, in consequence, seek employment in those occupations for which they are suitahly equipped and which will provide them with an enduring interest. The evidence which we have ohtained suggests that the great majority of hoys and girls do not receive in school sufficient vocational guidance of the right kind. There are various reasons for this. Secondary school teachers, even when they recognise the vital importance of vocational guidance to their pupils, are not well equipped hy training or experience to provide it. Careers masters and mistresses are scarce in the schools; practically none serve the pupils who are our concern. School records of the development and attainment of pupils are often not sufficiently comprehensive or do not give information in a suitahle form to provide an adequate hasis for vocational guidance. The officers of the Youth Employment Service find it impracticahle to visit pupils more often than once or twice towards the end of their secondary school course. It appears, too, that in a few areas co-operation hetween the schools and the Youth Employment Service is not yet as complete as is desirahle. This question of guidance is of great importance, and we shall return to it in section VII.

SELECTION BY INDUSTRY AND PLACING IN FURTHER EDUCATION

40. Complementary to vocational guidance in the schools, and of equal importance, is the process of selection of young recruits to industry. The final selection is the privilege and the responsihility of industry itself. Selection varies in efficiency from one industry to another and from one employer to another: in some instances it is more or less systematic, while in others it appears to he quite haphazard. The most highly organised selection procedures, which are generally used by the employers of large labour forces, usually include several, though not all, of the following features:—pre-selection of candidates hy the youth employment officer, written tests of English and arithmetic, aptitude tests, an interview of each candidate hy representatives of the firm, and consideration of school reports or headmasters' recommendations. Some firms set candidates written tests which are open to criticism on the ground that they are not closely related either to the demands of the job or to the work done in the schools. On the other hand, many employers contend that they cannot give weight to school reports since the standard of work and of assessment varies from school to school, and since, in their opinion, headmasters' recommendations sometimes inflate a pupil's attainment and potential out of a mistaken sense of kindness and in an effort to give him a chance.

41. The efficiency of selection by industry has a marked effect on the work of the colleges of further education. When employers have chosen their young

recruits carefully and well, it is a relatively simple matter for the college principal to place them in suitable courses of further education. Faulty selection, on the other hand, hampers principals very seriously in their efforts to guide young people into the vocational courses which are appropriate to their abilities. When only one course is associated with a particular occupation, the college is obliged to make the best it can of all those who enrol in it. Unless selection by the employer has been careful, there is always a danger that a young worker may find himself a misfit in the course, and, as a consequence of the experience, may forego further education for all time. Fortunately, courses at two or more levels of difficulty are associated with a number of occupations, and when this is the case the college principal may, if he has available the right kind of information from the school, be able to recommend to the young worker and his employer a course at a suitable level. Few principals, however, obtain the requisite information from the schools.

Claims of employers and of colleges

42. Since the aim of both the employer and the teacher in further education should be to enable the young worker to develop his full potential, it would be natural to expect that there would be no conflict in their requirements in respect of education and training. The observations made to us both by employers and by teachers confirm that there is, in fact, broad agreement, which is no doubt strengthened by the participation of representatives of industry in the work of the committees which design and keep under review vocational courses in further education. There are, of course, differences in emphasis. For example, the employer, who is directly concerned with production in the factory, tends to emphasise manual skills and those personal qualities which will contribute to maximum production, while the teacher is primarily concerned with the development of the individual and with principles and theories underlying the various skills. The claims of employer and of teacher in further education are not, however, substantially different and can be considered together.

43. Both employers and teachers believe that the schools, without interfering unduly with their general aims, should relate the study of the main subjects to the future working lives of their pupils and should broaden the curriculum on practical lines beyond its present confines. In their view, the final year of the secondary course should be designed to introduce pupils in a general way to the training and further education which are essential elements of their first few years in industry. They believe also that all pupils should leave school with sound habits of work and with a sense of purpose already developed. They have little complaint to make about the standard of attainment of pupils who are at or above the present average level; their school education provides an adequate basis for training and further education. The greatest need is to raise the level of attainment of the substantial number who are well below the present average.

44. Though the broad requirements of industry and of further education as they were presented to us appear reasonable, some of their criticisms of the state of readiness of school leavers for employment and further education ignored, in our view, certain characteristics of young people and some aspects of their secondary education. The rewards and conditions of work in certain occupations which demand considerable ability in the young worker sometimes attract candidates of widely varying capacity. If care is not taken in selection, employers and teachers cannot expect the attainment and performance of all the

candidates to be satisfactory but must expect those of the less suitable boys or girls to fall far below their expectations. Moreover, sufficient account is not always taken of the loss of learning which takes place when study is discontinued by young people for even a relatively short period; employer and teacher must both be prepared to accept a temporary loss of attainment in particular aspects of learning and to enable young recruits to revive their knowledge and skill through a short period of revision and practice. The broad general aim of secondary education does not normally permit the development of skills to the high degree that may be required in particular occupations; employers and teachers must be satisfied if the broadly-based skills acquired in school provide a sound foundation for further development to meet particular needs. Young people may reasonably be expected to perform well in tests which are based on material which they have studied in school. Educational provision and practice have undergone far-reaching changes in the past decade or so, and, in order to make sure that the assessment of young people is just, the assessor from industry or further education must base his appraisal on an up-to-date knowledge of current practice in the schools and of the standards which it is reasonable to expect. Most of the misunderstandings and difficulties that arise could be avoided if assessors from industry or further education were to establish and maintain very close contacts with the schools from which the recruits are drawn.

The subjects of the secondary school curriculum

45. The minimum standards of attainment in English as a means of everyday communication and in arithmetic for the purpose of calculation which are required by industry should present no undue problems to the secondary schools and to the great majority of the young people with whom we are concerned. Young recruits are expected to be capable of listening with understanding to simple oral reports and instructions, of reading and understanding simple written statements of a general or technical nature, of speaking clearly and making simple, understandable oral reports, and of writing simple intelligible statements. In calculations, they should be able to apply accurately the four rules of arithmetic to numbers, money, weights and measures and to use simple vulgar and decimal fractions and percentages. For a great many occupations, too, a knowledge of simple mensuration, practical geometry and general science as it is met in the everyday world is considered essential. These are minimum requirements; in some occupations an elementary knowledge of the use of symbols and of the construction and use of formulae and graphs is also very desirable.

46. Other individual subjects of the secondary school curriculum are important preludes to the vocational training and further education associated with particular occupations or groups of occupations. For example, technical subjects should provide prospective apprentices in the building and engineering trades with an introduction on general lines to the care and use of tools; to an understanding of the importance of materials, dimensions and shape in relation to the function of a manufactured article; to technical drawing as a means of communication in those trades; and to the principles of safety in the workshop. In a similar way, homecraft should, through its various branches, give to girls a useful introduction to fundamental skills and attitudes which are of importance in, for example, retail distribution, catering, the " needle " trades and nursing. In art, elementary ideas of design and display in relation to the manufacture and

sale of articles may well be introduced, and will be useful in a variety of occupations. Certain elements of commercial subjects in secondary schools provide a more specific training in skills as they are practised in the commercial world; the school must ensure that these skills are supported by the requisite competence in English and that the emphasis on training in particular skills is in line with the needs of commerce.

47. As a rule, firms prefer to train their young employees themselves in the practical techniques appropriate to the work that they are to do. They expect the schools to make sure that pupils enter on their new jobs realising fully that what they have been taught in school is only a prelude to the vocational training and further education that they will have to undertake in order to become fully qualified and competent workers.

48. Every branch of industry makes claims on physical education and health education. It is vitally important to both employer and employee that the latter should enjoy good health and physical fitness. Industry and commerce expect that the young people who come to them from the secondary schools will have a pride in physical fitness and will have developed physically active and healthy habits. At the same time, they are not unmindful of those who are physically handicapped and are making increasing provision to enable them to fit into appropriate niches.

Personal qualities and attitudes

49. Great importance should obviously be attached to the all-round development of young people, which involves much more than providing them with knowledge and skill. In some sectors of industry and commerce, personal qualities and attitudes are often considered to be more important than proficiency in academic subjects, and in others they may even compensate for some measure of weakness in these subjects. In selecting recruits, employers seek candidates with the qualities of self-discipline, self-reliance, loyalty, keenness and a sense of responsibility. Proper attitudes to work and to authority and the capacity to live in harmony with fellow workers are also regarded as very desirable attributes. A young person's success in his occupation depends in some measure on his ability to pass through the difficult stage of transition from life as a pupil to the much less protected life of a young worker without undue disturbance. Employers have found that the young people best prepared to make the transition smoothly are those who have shared in the full corporate life of the school and who have developed interests and pursuits which occupy their leisure hours profitably and enjoyably. In the conditions of highly competitive trade and of rapid industrial change which are experienced today, it is increasingly important that the education of young people should be directed towards developing in them flexibility of outlook and versatility in skill; the worker who by training and outlook is permanently confined in his work to a narrow and strictly defined field may be something of a handicap in industry.

50. It is clearly in the interests of every young person that he should receive in school the best possible preparation for his entry into industry and into the associated vocational training and further education. This preparation will be most effective and his transfer to industry and to further education will be smoothest if the legitimate expectations of employer and of college are met by the schools. The individual's needs, however, are much wider than those of his vocation, and preparation for his working life must not be made at the expense

of the development of the personal, social and civic aspects of his life. We are convinced that the demands of industry and of further education in respect of attainment and of the development of personal qualities, attitudes and interests can be readily met by the secondary schools. The schools have, however, still much to accomplish before they can be satisfied that they are doing all that is possible to prepare their pupils adequately for life after school. The changes required do not seem to be in their aims so much as in the means by which they strive to attain them.

IV. Courses in Schools and Colleges

Avoidance of a lengthy interval between courses

51. The importance to young people of avoiding a lengthy interval between their secondary schooling and their entry into further education cannot be overemphasised. Even in a relatively short period away from the classroom, young people lose much of the educational ground gained in school, particularly if their command of the knowledge and skill acquired is not very secure. Many of them also form new habits and interests and may become jealous of their freedom and loath to submit themselves again to the discipline of systematic learning. Those who eventually embark on a course of further education are severely handicapped by the appreciable weakening of their knowledge and skill, and their will to learn may be so seriously undermined as to prejudice their chances of success. *We recommend that education authorities should seek the co-operation of teachers, employers and parents in order to make sure that the interval between courses in school and college is kept to a minimum.*

Effect of school leaving dates

52. One of the main reasons for this interval in organised instruction has been the existence of school leaving dates at various points in the school session. Under new legislation, the number of school leaving dates other than that at the end of the session is reduced to two at most. Though this is very helpful, it will not eliminate the problem entirely. *We recommend that employers should, so far as possible, recruit boys and girls only after they have completed the secondary school courses on which they have embarked, and that teachers and parents should make every effort to ensure that pupils remain at school until they have completed their courses and are able to start an appropriate course of further education almost immediately.*

53. It is already established practice to begin certain courses in colleges of further education on more than one date annually so that young people are enabled to transfer from school to college without undue delay. This practice should be extended to every course for which sufficient numbers come forward in mid-session. The difficulties which colleges face in this matter would be eased if the authorities in the areas from which each college draws its students arranged common school leaving dates, and *we recommend that this should be done.* We understand that the City and Guilds of London Institute is prepared to make arrangements for examinations to be held at dates suitable for courses that are completed in mid-session where there is a reasonable demand. The Scottish Council for Commercial Education already sets examinations to suit courses which are completed on more than one date each year. If the total demand for a course is small, for example in less populous areas, it may,

however, he quite uneconomic to make provision for each stage to start more than once annually. *We recommend that, in these circumstances, education authorities should, with the approval of the appropriate examining bodies, offer to young people who have been recruited to industry about December or January special classes which would give them the opportunity of completing the first stage of the course by the end of the session;* all students could then begin each subsequent stage at the start of the normal college session. For this to be effective, employers would require to support these special classes by granting for a period to the young employees concerned some additional day release. It may be possible, with the co-operation of employers, to achieve the same ends for young people who are recruited to industry after a school leaving date at Easter by means of a short period of block release.

Interval before apprenticeship

54. Many pupils who are capable of entering on craft apprenticeships and who leave school at the age of fifteen are employed in a more or less general capacity until they can become apprenticed at the age of sixteen. This phase of employment may have some value in providing prospective apprentices with a gradual introduction into industry, but it must be recognised that serious educational risks are associated with the length of the period before apprenticeship begins. Some young people do not attend further education classes during that period and often do not take up the technical education connected with their trade when they become apprenticed. Some firms make it a condition that prospective apprentices who are employed in a general capacity from the age of fifteen to sixteen should during that year attend classes as a prelude to their trade courses; other firms train their young recruits on their own premises. The educational consequences to young workers of a lapse of the greater part of a year between leaving school and taking up systematic further education are, however, serious and we would urge strongly that, as a minimum step, all employers should make certain that their prospective apprentices follow appropriate part-time vocational courses. Greater benefit would really accrue to the young people, their parents and their employers if the advantages of immediate financial gain on the one hand or of obtaining a source of convenient general labour on the other were foregone, and the young people were encouraged to continue full-time education in a course with a vocational aim either in school or in a college of further education until they reached the age for commencing their apprenticeships. We commend the practice of a few firms which give their young recruits a short period of induction and then send them to a full-time course of general and vocational education. Such a period of induction enhances the value of the full-time course in all its aspects; it adds realism to the course, and the prospective apprentice's sense of belonging and his loyalty to his firm generally stimulate him to make the most of the opportunities offered in his further education and training.

Vocational elements in secondary education

55. The weight of the opinion and the evidence that we have heard is substantially in favour of the development in secondary schools of a meaningful incentive for learning that will be understood and accepted by boys and girls and their parents. This will involve the development of techniques of teaching that in the first instance match the modes of thinking of the pupils and are concrete, realistic, practical and concerned with visible results. *We believe,*

and we are supported in this by very many of those whom we have consulted, that the case is unanswerable for the use in schools of the vocational impulse as the core round which the curriculum should be organised. This is not to say that the vocational motive can or should be allowed to dictate the whole curriculum. All subjects of the curriculum should be seen as serving the end of developing all aspects of the personality of boys and girls; but they should also be seen as serving the additional end of widening the range of their experience and of preparing them for life after school. While there is general agreement that the introduction of vocational elements into secondary education is desirable, both for educational reasons and for the purpose of co-ordinating secondary education with further education, there are, however, wide divergencies of opinion on the way in which this should be done. Three main views emerge.

56. On the one hand, some people suggest that any vocational elements that are introduced should be of the most general nature only and should not relate exclusively, or even very closely, to any particular occupation or industry. Any bias should be given more through the approach of the teacher to existing courses of general education and through changes in methods of teaching and of learning than through alteration of the form and content of the courses. The work done in the various subjects of the curriculum should arise out of and be illuminated by frequent references to, and practical illustrations from, the various major industrial and commercial activities of the district as part of the local environment. On occasion, a substantial proportion of the work in the various subjects should be directed towards some activity such as steel making or farming, or towards a group of related activities such as those connected with shipbuilding and commerce in a large river basin like the Clyde, which influences strongly the lives of the people in the community.

57. By contrast, some people believe that the courses provided in the secondary school should be largely of a vocational nature and should prepare pupils for entry into particular trades and occupations. These courses should include a substantial element of general education but should provide also specific preliminary training in the practical skills appropriate to the occupations, and in the related technology.

58. In between are those who advocate the introduction of courses which provide a broad general preparation for a group of occupations associated with a particular industry or service. By far the greater part of these courses would be concerned with general education and the all-round development of the pupils, but they should include elements of a definite vocational nature and should provide some experience of the practical skills appropriate to the various occupations in the industry. The vocational elements should be regarded primarily as providing a central interest which motivates the work of the whole course.

59. Though these three views represent different approaches, we regard them not as mutually conflicting but rather as appropriate to successive stages in the development of the vocational interests of young people. The very general approach described in paragraph 56 emphasises one aspect of the environmental considerations which should influence secondary education from its very start and should play a growing part in the instruction throughout. The type of course discussed in paragraph 58, offering a broad approach to a particular industry or service, has its place in the third year of the secondary course. The narrower vocational course referred to in paragraph 57 is appropriate at

the stage when the young person's vocational ambitions tend to be clearly crystallized, i.e., after the age of fifteen; this type of course, therefore, should be provided either in a fourth year at a secondary school or in the first year of a college of further education.

60. At present the large majority of schools are undertaking no more than the very general approach and in many of them the references made to local industry are so casual and infrequent as to have little effect on the work and the attitude of the pupils. A major reason for this often lies in the inexperience and relative unfamiliarity of subject teachers with the principles and practices of local industry. There is an urgent need for the schools to improve this situation by enlisting the co-operation and seeking the advice of people in local industry and of teachers in further education. Even, however, when this general approach is well developed it fails to be wholly effective, especially with the older pupils. Their natural interest in the adult world which they look forward to entering soon demands from the school a curriculum which is in their eyes more manifestly and more directly connected with the daily work of that world. As we have already remarked, the efforts of the few schools which have so far developed in their third year courses providing a broad approach to particular industries have proved remarkably successful in catching and holding the interest of the pupils not only in the more directly vocational parts of the course but also in the more general subjects. The whole attitude of the pupils towards school has sometimes been transformed. *We recommend that as many schools as possible should proceed to introduce courses of this type.*

Courses with a vocational intention

61. A description is given in Appendix 1 of some courses of this type which are already being provided in different schools and colleges. It will be seen that some of them are based on, and are in a sense developments of, the traditional "practical" subjects of the accepted secondary school curriculum. Thus, certain subjects in engineering and building are developed from different branches of technical subjects, in agriculture from rural subjects and in marine occupations from nautical subjects. Other subjects, however, such as bricklaying in the building course and salesmanship and shop practice in retail distribution, have no corresponding secondary school subjects although much of their content may have connections with several general and practical subjects of the traditional secondary school curriculum. This difference is not unimportant and, as further education develops locally, the schools should be alive to the possibilities of introducing other non-traditional courses in the third year to link with the provision made in colleges.

62. It may be worth while, even at this early stage in the development of these courses, to make certain general comments. First, the teachers, in their planning and applying of the courses, should not aim at too narrow a vocational front. They should still keep in mind that their aim is to assist the all-round development of their pupils and not to provide them with a mere training as future workers. A sensible level of attainment in the general subjects, in keeping with each pupil's potential, must be given its due place alongside the vocational activities which may, at least in the first instance, hold more appeal for him. Experience of these courses in both Scotland and England, however, shows that the general level of education is raised rather than lowered by the introduction of a vocational motive, especially when the work in the general subjects

is closely and clearly related to the central core of the course. The view of employers and of teachers in colleges that the schools should not concentrate on the attainment of a high degree of skill in specialised industrial and commercial techniques is generally valid. This is not to say that instruction in these techniques has no place in secondary education; a moderate amount of training in appropriate skills undoubtedly has a stimulating effect on the general work of the course and encourages proper attitudes to equipment, materials and design. It also satisfies the need of the young people for real and life-size activities.

Need for certain safeguards

63. Care must be taken to ensure that the course followed by a pupil does not commit him prematurely to an education that will unduly limit his choice of occupation when he leaves school. Young people clarify their vocational interests and aspirations at different ages. Sound vocational guidance given from the beginning of the second year of secondary education will help to lead them to valid and firm, though broad, vocational interests by the end of that year. Though it would be wrong to lay down rigid rules about the stage at which a vocational motive should enter specifically into secondary school courses, the balance of evidence suggests that, in general, courses which are biased towards particular industries may be introduced towards the end of the second year or the beginning of the third year. It is important that the central core of the course should be one that allows of a broad approach. Its natural content should have general value to the pupil as a person and not merely be of narrow use to him as a worker. Thus, the internal combustion engine may justifiably be made the central theme of the engineering course, partly because of its profound effect on our way of life and partly because a knowledge of it may be of considerable help to anyone. The building course should help the pupil not simply to understand building practice as a bricklayer or joiner, but to understand and appreciate houses as a tenant or owner. Not only is the course in retail distribution a worthwhile prelude to the training and education of the girls who may enter the industry, but it emphasises good speech, good deportment, an understanding of human relationships and a knowledge of commodities and of shopping from both sides of the counter, which are assets of value to any girl. Courses in agriculture and in marine occupations do not merely provide training for the future land-worker or fisherman, but enable the pupil to live a fuller and richer life in the country or by the sea no matter what his eventual occupation may be. Courses which do not have this broader value have no place in the first three years of the secondary school. Nevertheless, the courses should be so designed and so applied that the pupils may continue them beyond the age of fifteen either in school or at college, and at this stage on the narrower front directed towards particular occupations or groups of closely related occupations.

64. It is sometimes objected that young people who develop a strong vocational interest in school may suffer frustration and disappointment if, on leaving school, they find themselves forced to enter an occupation which is not entirely appropriate. Teachers and others who have experience of vocationally biased courses, however, have assured us that this problem is not a serious one. Nevertheless, it should be minimised as far as possible by the schools. In each area the variety of courses to be provided and the number of pupils for which each is to cater should have regard to the vocational opportunities in and

around the area. The good-will and interest of employers should be fostered, and they should be encouraged to take account of the work done in school when they are recruiting young people to their firms. Success in this respect will depend largely on the esteem which boys and girls, the products of each course, build up for the course among employers and teachers in colleges. Pupils should be made aware that the mere fact that they have followed a particular course is no guarantee of future employment in the appropriate industry; employers will select those who seem to them best prepared and best suited to the work.

Co-operation with industry and further education

65. Well-planned courses such as we have been discussing promote the co-ordination of secondary education with further education by their very nature. Without detracting from their breadth, however, much closer links with employment and further education may be sought. The schools should seek the co-operation and advice of teachers from further education and of employers in designing and organising courses, and should be prepared to modify them so that the needs of industry and of further education may receive appropriate attention; the courses will thereby gain in realism and all the subjects will benefit. The continuity of the educational process in secondary and in further education will be emphasised if the course in school includes a vocational element, e.g., building, engineering, catering or nursing, which may also appear under the same name in the relevant courses in college. The importance of general studies in such subjects as English, history, geography, mathematics and science for the development of practical or vocational elements should be constantly demonstrated by the teacher; this will be easier and more effective if there is full co-operation between subject departments and if the interaction of the various subjects on each other is made readily apparent. Pupils should be left in no doubt that their work in school, both in general studies and in more vocational activities, is only a prelude, though an important prelude, to training in industry and to further education after they leave school. Throughout the course teachers should try to discover and develop each pupil's special talents; assessments of his scholastic progress and his development in character and personality should be made frequently, with the aim of building up a picture of him which will facilitate his eventual placement in suitable employment and his introduction to appropriate further education.

Extended and pre-employment courses

66. Gradually increasing numbers of boys and girls who are not following courses which lead to the Scottish Certificate of Education are remaining in full-time education beyond the age of fifteen; and this trend may be expected to develop further, especially when the number of school leaving dates is reduced and the aims of three-year secondary school courses become more obviously relevant to the future careers of these young people. There seems little doubt that, if young people have received adequate guidance over a period in school, their vocational intentions should be more clearly established at the age of fifteen, and their growing maturity should enable them to appreciate more fully the value and the essentially preliminary nature of their secondary education in relation to their prospective occupations and further education. Many boys will, however, be denied the advantages of a complete additional year of full-time education unless the rules which govern the age at which they may become

apprentices in certain trades can he made more flexihle. It would help greatly if these rules were more in keeping with modern trends in education and were co-ordinated with school leaving dates rather than related to a rigid and narrow age range.

67. Opinion is divided as to whether full-time education beyond the age of fifteen should be conducted in extended courses in secondary schools or in pre-employment courses in colleges of further education. It is maintained, on the one hand, that secondary school teachers have, or have readier access to, an intimate personal knowledge of the pupils; the pupils are more at home in the familiar atmosphere of the school; the schools have a greater tradition of success in dealing with the general elements of education which must always be of the greatest importance; and the presence in school of more mature pupils benefits the schools and the pupils themselves. On the other hand, it is claimed that colleges of further education are better placed to provide successful vocational education since they are in close contact with industry and their teachers have industrial experience; accommodation and equipment which are required for certain vocational instruction and which are already available in colleges would have to be provided at considerable cost in secondary schools; the more adult atmosphere of colleges is better suited to young people over the age of fifteen; and secondary schools are too short of staff to take on additional commitments.

68. Though there is some truth in the various assertions, none of them need apply equally to all young people and the conditions which they reflect need not and should not be permanent. When tbe number of young people who remain in full-time education beyond the age of fifteen is substantially increased, it may be just as economical to make provision for various kinds of pre-employment education up to the age of sixteen or seventeen in secondary schools as in colleges of further education. In the meantime, education authorities should decide, in the light of all relevant local circumstances and with long-term trends in mind, whether a particular course should he provided in school or in college. In more populous areas some courses might well be provided in both schools and colleges, and pupils could be given the choice of continuing their education in school or of transferring at the age of fifteen to a college of further education. In other areas, where it may be impracticable to provide any instruction in particular vocational subjects in the secondary schools, pupils might, from the beginning of their third year, go to the local college of further education, under some form of day-release, for instruction in those suhjects, while continuing to receive the more general parts of their education as pupils in the schools, at least until the age of fifteen.

69. We envisage a widespread development of extended courses, in school or college, which would follow on naturally from the courses with hroad vocational elements which we have recommended for pupils in their third year of secondary schooling. Though these courses would generally include a more suhstantial and specific vocational content than is proposed for the earlier courses, they should still retain a large proportion of general studies. Third year courses with a general bias towards engineering, for example, might extend into fourth year courses with vocational elements which would take up about half the time and aim at particular groups of engineering trades. The aims as well as the pattern of courses will vary from one course to another and from one area to another according to the particular vocational interest and the nature of local

industry. Courses in commercial subjects and nursing, for example, which are available in some areas, are related to particular occupations and, in addition to their general elements, include vocational subjects which lead to external examinations. In one college, a course in building is offered which covers the various trades of the industry in the first half of the course and concentrates on each boy's particular choice of trade in the second half. Pre-apprenticeship courses, each of which covers a wide variety of engineering trades, are offered in a number of colleges. We refer in Appendix 1 to a numher of courses of this kind.

70. The full advantages of the co-ordination of these extended courses with employment and with part-time vocational courses in further education must he sought in consultation with teachers from colleges of further education and with employers. Industrial methods and needs change and consequent changes have to he made in the related part-time trade and other vocational courses in further education. Extended courses in school or college must also be kept up-to-date. In a few instances examining hodies, such as the City and Guilds of London Institute, the Scottish Council for Commercial Education and the Royal Society of Arts, accept pupils from full-time courses in school as candidates for certain examinations which are normally associated with part-time vocational courses in further education; this policy, although it is unlikely ever to have extensive application, might, we understand, be extended in appropriate circumstances. The close affinity of the vocational elements of extended courses in school to the corresponding subjects in vocational courses of further education, which enables pupils to present themselves as candidates at these examinations, has a number of advantages for the pupils. The attention given to the vocational elements must, however, not be greatly in excess of anything that is possible in a part-time course of further education and the pupils' comparative in-experience of industrial conditions and techniques must be taken into account in their later training and further education.

71. Though full-time courses with strong and varied vocational elements are offered to pupils between the ages of fifteen and sixteen in different parts of the country and receive varying degrees of support from pupils, parents and employers, there is scope for much more intensive and widespread promotion of courses to suit all kinds of vocational interests. Education authorities should not feel ohliged to wait for a demand for courses to come from local employers, hut, as some of them already do, should encourage the development of suitable courses in the interests of the young people in their schools and colleges, and should seek the support of local employers on the ground of the benefit which the courses convey.

General courses in schools

72. The value of courses which include recognisable vocational elements has been emphasised in the above paragraphs. The interests and the needs of some able boys and girls who will seek employment in commerce and in the public services may, however, hest he met through courses which are of a more general nature. The schools should, so far as their resources permit, give these pupils the opportunity of studying more intensively the subjects which, on general or vocational grounds, are of particular interest to them. It is of great importance that they should be encouraged to attain their full potential, and the necessary modifications should he made to their courses to enable them to do so.

Preparation for entry into industry and commerce

73. A few schools attempt to give their pupils some preparation for their entry into industry and commerce, so that the effects of the somewhat abrupt change from being a pupil to becoming a paid employee may be minimised. This is usually done in a special course with a total duration of a few days but spread over the last three or four weeks of the pupils' schooldays. At least two education authorities have, however, achieved the same purpose by means of residential courses extending over a number of days for pupils who are about to leave school. The courses of this kind of which we have knowledge have dealt with such matters as conditions of work, attitude to work, prospects, further education, and trade union affairs, and have provided some guidance in how to budget for living and other expenses. Much of the instruction has been given through talks and discussions with representatives of local industry and with youth employment officers, and these activities have been linked with the schemes of industrial visits arranged by the schools. A good deal of the work covered in this way should, of course, form part of the normal education of boys and girls in school. The advantage of the specially organised instruction as the time for leaving school approaches is, however, that it focusses attention on the problems involved in the transition from school to work; moreover, it provides a very good opportunity for close collaboration with the Youth Employment Service. *There is much to be said in favour of this practice, and we recommend that it should be extended.* Indeed, we would hope that many more firms than at present would provide for their young recruits courses of induction which might very suitably be linked with the corresponding courses in schools.

FURTHER EDUCATION

Revision of courses

74. Teachers in colleges of further education must relate their instruction to the work which their students have completed in school. In the early stages of courses, they will naturally base the instruction on the student's experience, on the methods of teaching and of learning to which he has been accustomed, and on his attainment in the various branches of his secondary education. We have no doubt that the quickening of interest which will come from the introduction of vocational elements into secondary education will lead to improvements in the standard of general education of a large proportion of the pupils in the schools. The college of further education should be prepared to profit from this improvement and, as far as is practicable, to continue the general education of its students, so that their all-round development may be assured. The college will also be assisted in the main vocational aspects of its work by the fact that its young students will have obtained in school some background of practical knowledge related to vocations, though this will naturally not be accompanied by industrial experience and training. It seems to us, therefore, safe to assume that, when new courses of the type that we envisage have been introduced into the secondary schools, a comprehensive revision of many courses of vocational further education will become necessary. This is bound to be quite a lengthy process; there will inevitably be an interim period when some young students will have had a different, and more suitable, school preparation than others, and the colleges will have to modify their courses, where necessary, so as to meet the needs of different groups. What is of first importance is that the colleges should be prepared, within the limits of practical possibility, to adapt

both courses and teaching so as to take account of differences in ability among their young students and the corresponding differences in their attainment in secondary education. A successful beginning in further education is very largely dependent upon alignment of the early instruction with the young student's achievements in the secondary school. *We therefore strongly recommend that the committees or other bodies which review courses of further education should invariably include in their membership teachers from secondary schools.*

Exemptions

75. Difficulties of greater or less degree will be experienced in colleges of further education in making arrangements to suit students with varying attainments. If success in previous studies warrants a student's exemption from the whole of the first stage of a course, he will usually be short of experience in practical industrial or commercial skills and will require more practice in these than others who have received no remission. It is of great importance that students should not waste their time or lose interest by repeating work with which they are familiar. If the total number of students in each stage of a course warrants two or more classes on the same day of the week the needs of particular groups may be met fairly easily, although some minor adjustments of the work of individuals may be required within each class. If, however, the number of students in each stage does not warrant more than one class it will be more difficult to arrange appropriate remissions of work and adjustments of the course. Provided that the number of students is not unduly large, we believe that the majority of teachers will be able and willing to organise the work of the class so as to meet their varying needs; they will feel amply repaid for their extra efforts by seeing the benefit to the students.

76. In some individual cases it may be desirable to grant students exemption from a whole stage or part of a stage of a course of further education so that they will not waste time on work with which they are already familiar. This is not out of line with the policy of the examining bodies. Principals of colleges of further education have the power to adjust or remit some part of a course when they consider it desirable, but they often find it difficult to do so. Even at the expense of some administrative inconvenience, however, students' courses should be modified within reason to suit their previous studies, their attainment and their ability.

Bridges

77. At the level with which we are dealing we do not envisage that rigid conditions of entry to courses will be imposed. A few students will inevitably find themselves in unsuitable courses; some who have marginal ability will find their original course too difficult or will show the capacity to benefit from a course at a higher level. This is not of great significance provided these students are enabled to transfer quickly to more suitable courses. When the transfer is to a course at a higher level it may be necessary to provide some additional instruction which will bridge the major gaps between the original and the new courses.

Non-vocational elements in vocational courses of further education

78. We have already stated our conviction that systematic education aimed at the all-round development of the individual should continue beyond the secondary school stage. The school seeks to provide a sound basis for the further

development of those studies and interests which every young person requires if his life as an adult is to give him real satisfaction. Unfortunately, until recently most part-time courses in further education were necessarily framed within the narrow limits imposed by the time available in evening classes. In consequence, there was no alternative but to concentrate narrowly on vocational studies whose industrial relevance and practical application were both direct and immediately obvious. Within recent years some headway has been made not only in including in some part-time courses a small but important element of general education which builds further on the foundations already laid in the secondary school, but also in introducing in vocational subjects material and an approach which exert a liberalising influence on the students. We believe that similar developments should take place as soon as possible in all part-time courses.

79. A particular need of the young people with whom we are concerned is to consolidate and improve their skill in the use of English, both oral and written. At work and in college the youth finds himself in more adult situations than those he found as a pupil; these situations impose greater demands on his capacity to understand instructions, to convey information clearly to others and to make notes and other types of records for the use of himself and others. It is common knowledge that most young people need help and sympathetic guidance as well as practice in developing these communication skills, and this is a form of assistance which teachers in further education should make a point of giving.

80. In a broader context, the staff of the college are well placed to develop substantially the work which should already have been begun in the secondary school to prepare pupils for entry into industry and commerce. The change from the relatively sheltered life of pupil to that of young worker is a dramatic one. The young person's situation at work, at home, in his leisure time and in the college is substantially different from that to which he has been accustomed. He has a great need for information of an objective and unbiased kind, for example about industrial relations, personal finance and budgeting, personal relations in an adult world, and about the local community and the facilities and opportunities it affords for the development of personal interests and for service. A positive effort is needed to give him guidance, which may not be available to him elsewhere, in the development of personal attitudes and standards and in determining the interests and activities which he should pursue.

81. In our deliberations we have used the term " general studies " to refer to this wide field of activity, which includes continued general education, liberalising elements and an introduction to the wider community in which the young person has to find his place. The very newness of the field brings a number of problems. Even in those day-release craft courses in which an allocation of time is made to general studies, this is usually limited to about one hour per week, and in this allowance of time it is very difficult to realise the educational objectives. It should, however, be borne in mind that a good introduction to this kind of work has been provided in the schools, an introduction which should become even better as courses in schools are reorganised on the lines that we have recommended. Moreover, as we have already indicated and as we shall develop later, lines of communication between schools and colleges should be such as to enable the colleges to start their work where the schools have left off.

82. Some students and, indeed, some employers (including foremen and supervisors) have been opposed to the use of any part of a young worker's time in day-release classes for purposes that are not explicitly vocational. But much of this opposition arises from unawareness of what is attempted and lack of knowledge of what can be achieved in these non-vocational studies, including their value as reinforcement to the vocational studies themselves. One college, we have learned, has achieved success in eliminating opposition by inviting employers, training officers and supervisors to see at first hand something of what is done. We have also been convinced that where the approach is imaginative, teachers are achieving undoubted success and students find their studies both stimulating and worthwhile. Much progress in improving teaching method will have to be made before such success is general. It is most important that the students should not merely be passive listeners; if significant progress is to be achieved student interest and student participation are vital. The teaching of English and of general studies should be regarded as a combined operation, with the general studies providing a body of interesting and significant material which evokes personal involvement on the part of the student. It is in the course of such involvement that the student provides himself, almost unconsciously, with practice in the skills of speaking, listening, writing and reading.

83. Teachers specially appointed for work in general studies will no doubt make the best of any advantage to be gained by basing part of the work on the student's vocational interest. The greater part will, however, usually develop out of the general, social and aesthetic studies to which we have referred and which provide links with the secondary school courses. It will be essential that the subject matter chosen by the teacher should be such as to command his own strong personal interest. For these and many other reasons it would be fruitless to prescribe a detailed syllabus in general studies. At all times, the teachers' approach will need to be in keeping with the stage of development and general characteristics of his students—not least their verbal limitations.

84. The separation of the technical and general content of the course has an obvious disadvantage. The student may well regard the general studies as of far less importance than the purely technical, especially as he may have an examination to prepare for in the technical part of the course. It is, however, already a growing practice for external examining bodies such as the City and Guilds of London Institute to make the satisfactory completion of a college's own course in general studies a condition of entry to the external examination. The separation of technical and general studies should not be allowed to reduce the incentive of the technical teacher to adopt a liberal approach in his presentation of his technical subjects; we believe that general studies are an important part of the college curriculum and that the teacher of vocational subjects, as well as the teacher of non-vocational subjects, has a contribution to make to the work of the college as a whole and to the all-round development of the students.

85. We have already mentioned in paragraph 32 a number of courses of a " general " nature which are already conducted in colleges of further education for young people in certain clerical occupations or in jobs where little or no vocational training is required. These courses have progressed beyond the experimental stage and a considerable measure of success has been achieved, especially where the diverse interests of the students can be met by offering them, in addition to the basic subjects, a choice from a wide variety of subjects or activities such as spoken English, including drama, social studies, simple econ-

omics, foreign languages, science, art, music, crafts, hobbies, home-making, physical education and health education, and where the teacher has not been restricted by a rigid syllabus but has felt free to develop the subjects to suit the educational background and maturing interests of the students.

86. It should be abundantly clear from all that we have said that we attach great importance to the energetic development of general studies in both full-time and part-time courses of further education. *We recommend that the many opportunities in this field of co-ordinating the work done in secondary schools with that attempted in colleges of further education be exploited to the full.*

V. Content of Subject Courses and Methods of Teaching

87. If secondary education is to be co-ordinated effectively with further education, there will have to be reasonable dovetailing of syllabuses and assimilation of teaching procedures in schools and in colleges. This can be achieved only through consultation among teachers. This consultation will, however, not be fully successful unless teachers cultivate an attitude of co-operation and goodwill and set themselves deliberately to break down the barriers which, as we have already noted, all too frequently have separated secondary education from further education. Exchange of ideas and readiness to modify and adapt both programmes of work and methods of teaching will have to be encouraged; there is no room for rigid views as to the precise ground to be covered in different subjects or in different courses and as to the methods of teaching which are most appropriate to the young people passing from the status of pupils to that of students.

88. The machinery of consultation will naturally vary from one area to another in accordance with the local organisation of secondary and further education. Whatever form the machinery may take, however, it should be of such a nature as to encourage close contact and regular maintenance of interest between the two parties. Decisions about subject syllabuses and methods of teaching in secondary schools should, of course, be made ultimately by secondary school teachers and in colleges of further education by college teachers; but decisions should be the outcome of mutual discussion and of consideration of the interests of the young people, whether as pupils or as students.

Subject syllabuses in secondary schools

89. There are certain general principles which should guide teachers and others who are concerned in the selection of material for inclusion in school syllabuses. These principles are discussed at length in "Junior Secondary Education"; they are applicable over the whole field of education and are sufficiently important for our particular purpose to be repeated briefly here.

90. The content of a subject syllabus should be planned carefully so that in quantity and quality it matches the resources of the young people who are to follow it. Overcrowded syllabuses result in too ambitious programmes of work, which prevent teachers from varying the subject matter and experimenting with new approaches and new methods of presentation to suit the needs, the abilities

and the varying backgrounds of their pupils. It is sometimes desirable for a teacher to pursue further than usual some topic which proves to be of marked interest to a particular class and consequently of special value to the pupils. Overcrowded and over-rigid syllabuses also force teachers to "cover the course" by employing methods which have little lasting effect and are boring to their pupils. Pupils learn more surely, if perhaps more slowly, through methods which do not aim merely at the imparting of skills and of facts but rather stimulate in them a desire to apply themselves and to learn more for themselves. Syllabuses should be such that they can be covered without preventing teachers from using the methods which will be most effective with their pupils. The school teacher should aim in the first instance at covering very thoroughly the work which will enable his pupils to satisfy the minimum requirements of industry and further education which we outlined in section III; with slower pupils he may well be unable to attempt more, but he will naturally wish to carry abler boys and girls as much further as they are able to go.

Selection of material

91. A strictly formal and logical development of a subject is not essential to the pupils who are our concern; more often than not it serves only to confuse them and to hinder their progress. What is to be taught should be selected because of its appositeness to the pupils' experience, its present and future usefulness in their daily lives, and the contribution it can make to their general personal development and their capacity to come to terms with their whole environment. Topics should be chosen which can be so presented that boys and girls will not only find them interesting but will appreciate their practical usefulness. The application of these criteria, even in their widest sense, undoubtedly has a bearing on the effective co-ordination of secondary education with further education and employment. In secondary school courses, for example, selected vocational elements, whether general or specific, are likely to satisfy these criteria. Moreover (and we cannot repeat this often enough) experience during the past ten years has shown that the interest motive arising from these elements is so strong that most pupils are stimulated by them to work much more earnestly and purposefully in all branches of their courses. *We recommend that in all appropriate subjects considerable importance should be attached to practical aspects and to illustrations from the field of employment in the selection of material to be taught.*

92. Secondary education as a whole will be made much more effective if the programmes of work in the various subjects in the early stages are so planned as to lead naturally into what will follow in the third and fourth years. If adequate liaison with further education and with industry has been established, teachers should find it relatively easy to obtain simple practical applications in a variety of local industries of the basic facts and principles which are taught in these earlier stages. At the later stages of secondary school courses, when the definite vocational interest which we have advocated has been introduced, closer integration should be sought of what is taught in school with what is to be taught in the ensuing courses of further education. The steps to be taken to facilitate integration of this kind will, of course, vary according to the nature of the subject, but the principle should be applied whether a subject is itself of a vocational nature, is basic to vocational studies, or is only indirectly related to employment and to vocational further education.

93. Subjects concerned with the theory and practice of trades and other occupations provide the most obvious opportunities of heing built up into coherent courses of the type which we have recommended and therehy estahlishing close and clearly perceptihle links with further education and employment. Teachers of existing practical suhjects will have to reconsider their approaches to teaching, adjust themselves to new ideas and, perhaps, discard some long-established practices. Some suhjects which are new to the secondary school curriculum may well have to he introduced and the syllabuses in existing practical subjects will have to be reconsidered in order to relate them to various industries and groups of occupations. Teachers with new types of qualifications may have to he recruited, or the part-time services of teachers from colleges of further education may have to he enlisted, before syllahuses in these new suhjects can be planned and put into operation; if steps of this kind are taken, however, the teachers concerned will naturally have to adapt the things that they teach and the methods hy which they teach them to suit pupils at the secondary school level. Some illustrations of ways in which traditional and non-traditional suhjects have heen developed in courses which are already provided in some schools and colleges will he found in Appendix 1.

94. A prominent place in the secondary school curriculum is occupied hy suhjects such as English, history, geography, mathematics, general science and art. These suhjects may he continued as basic studies in certain courses of further education—for example, English and geography in certain commercial courses or mathematics and science in certain engineering or building trade courses—or they may he developed only as the need arises in craft or technical studies. We have already made it clear that one of the purposes of secondary education as a whole is to provide the pupils with a general equipment and preparation for further study, and that a general aim of the schools should therefore be to enahle pupils to meet the basic requirements of vocational studies after they leave school. We have also stated on several occasions our firm belief that the introduction of vocational elements into secondary school courses, while it will obviously give pupils a hetter preparation for vocational studies in further education, will also stimulate their study of a wide range of suhjects in the secondary school and therehy lead to an improvement in their general education. The particular contrihution which each of the appropriate subjects should make is a matter for consultation hetween school teachers and college teachers. Suhstantial change in the actual content of some suhject syllabuses may be desirahle, while in others all that will be required is a change of emphasis. In all their discussions teachers should, of course, hear in mind the need to maintain in syllabuses a proper halance hetween the vocational needs and the general education of the young people.

95. In any course in the secondary school which has a particular vocational hias, certain suhjects, for example music, art, a modern foreign language, or a specific hranch of science, may have no ohviously direct hearing on the central theme of the course. This is not to imply that such suhjects are unimportant. They have a real contrihution to make to the all-round development of hoys and girls and therefore to their effective preparation for further education of all kinds. Moreover, interest in these suhjects may he maintained in informal classes outwith a vocational course, or as liheral studies in a vocational course of further education. We discuss this further in section VI.

Syllabuses in further education

96. In further education, vocational courses as a whole as well as individual subject syllabuses are determined largely by vocational considerations as expressed by industry and commerce. These courses generally lead to external examinations, based on syllabuses which inevitably impose some constraint on the teacher. In fact, however, teachers have much more freedom to plan their courses than is sometimes suggested. For example, the syllabuses of certain craft courses of the City and Guilds of London Institute are set out in considerable detail and show the inter-relations of the various subjects, but teachers are adjured by the Institute to exercise their discretion in the treatment of topics and to draw up their own schemes of work based on the syllabuses. It is our view, therefore, that the general criteria to be used to determine the content of a young person's studies in secondary education are in great measure still valid in further education. We have already emphasised how vitally important it is for college teachers to know what is included in subject syllabuses in secondary schools so that they can arrange for their own syllabuses to follow on naturally, in the earlier stages, and thus to link closely with the work done in school. Some things which have been studied thoroughly in school will have to be recalled briefly; others which have been studied less extensively will have to be revised briefly and developed further to the required level; others again, which have not been included in secondary school courses, will have to be introduced as new topics. The young people should not be bored by needless repetition of work with which they are reasonably familiar or handicapped by an assumption of knowledge or skill which they do not possess. Provision should be made also in the relevant programmes of work to ensure that skills and knowledge which the young people have acquired in school and which will be useful in later vocational studies are not allowed to deteriorate for lack of use.

Teaching and learning

97. Success in the study of any subject, whether in school or in college of further education, depends not only upon the nature of the syllabus but also upon the methods by which it is presented and the methods of learning which are practised. Young people should be taught by methods which take account of their natural interests and attitudes, which may vary widely, and of differences in individual ability, aptitudes, attainment and temperament. We have emphasised the importance of success as an incentive to these young people, an importance which becomes progressively greater the less able they are; they should be taught and should learn by methods which make reasonable demands on their intellectual and physical resources and which give some assurance of success for a reasonable expenditure of effort. In order to strengthen their powers of retention and recall, skills and knowledge should be acquired through as many of the senses and in association with as wide a variety of physical and mental activities as possible.

98. The part which schools and colleges have to play in the task of developing sound qualities of character cannot be made the exclusive province of any one teacher or any one subject; the deliberate and sustained efforts of all teachers are required. Progress should be sought by placing young people in situations which require them to perform tasks calling for the exercise of the qualities it is desired to encourage. They develop initiative, self-reliance and perseverance when set tasks which are just within their resources and which require them

to plan their approach, to use skills and knowledge already acquired, to discover new facts and acquire new skills for themselves, and to draw their own conclusions from the things that they observe. A sense of loyalty is encouraged by participation in the activities of a team or group in which the conduct of the individual patently affects the welfare or success of the whole group. Working in small groups also gives young people an opportunity of developing qualities of leadership and of learning to live in harmony with their fellows. A firm sense of honesty and of responsibility is more likely to grow in a boy or girl who is trusted to behave with honesty and responsibility in situations where some freedom of action is allowed than in one who is kept under constant surveillance and has no freedom. Some young people will no doubt tend to misbehave if they are suddenly freed from close supervision; we have, however, been told by teachers who have experience of these methods in schools that difficulties of this kind occur less frequently than many teachers expect and are far outweighed by the benefits of treating young people as responsible individuals. Such treatment, too, helps to give the young people a balanced view of authority.

99. The methods of organising the work of a class cannot be uniform and should vary according to the nature of what is being done and the ability of the members. The boys and girls in a class may be taught in one large group, in smaller groups or as individuals. Class teaching is a suitable means of conveying information to all the members of the class rapidly and economically or of discussing generally a topic which is of interest to everyone. As a rule, however, the young people with whom we are concerned have difficulty in concentrating or even in listening, for a prolonged period, and prefer to be active rather than passive. The good teacher is prepared to change from class teaching to other methods before boredom sets in. Group and individual activities are essential in every class in order to cater for variations in ability, aptitude and attainment. The organisation of the work into group and individual activities has, however, other advantages. As progress is made assignments may be used, for individuals or for groups, which demand the planning of more complex sequences of activities over longer periods of time. Assignments may be so designed that young people have to learn things for themselves by questioning others, by consulting books or by observation; the amount of guidance and supervision is easily varied from one individual to another and from one group to another. Under the guidance of the teacher, a small or a large group may undertake a project centred on some particular interest and confined to one subject or covering a number of subjects; the project should offer them opportunities of learning through activities which appeal to them and of seeing their skills and knowledge applied in real tasks. Not all the work of boys and girls who learn by these methods is confined to the classroom; they may have to visit the library or other departments of the school or may even have to leave the premises to visit places in the locality. Visits to selected places in industry and to local government services, and field studies in history, geography, and science make a valuable contribution to their studies. Valuable help may be gained, too, by inviting into the school or college a person with special experience, skill or knowledge to talk—and perhaps give a practical demonstration—to the pupils and to discuss his particular interest with them.

100. If the methods of teaching and learning which are discussed above are fully exploited in secondary schools, boys and girls should, when they transfer to employment and further education, be more self-reliant and have sounder

habits of work than has been general in the past. As teachers in further education become familiar with what is happening in secondary schools, they should increasingly adopt methods of teaching similar to those used in the secondary schools, at least at the earlier stages of their courses. Reliance on a lecturing technique at these early stages has many disadvantages. As a rule, the young people do not have sufficient intellectual capacity or maturity to take their own notes of extensive lectures, and need further training in this specific skill. They respond better, too, when the process of learning involves more activity. No matter how efficient the work of the secondary schools may be, some boys and girls will go forward to further education with some weakness in the basic skills. A direct attack on these weaknesses is not advisable, since the students are most likely to resent being reminded of earlier failures. Any weakness in the basic skills will become apparent in the course of their application and should, as far as possible, be corrected tactfully and sympathetically through appropriate individual exercises.

Teaching aids

101. Teachers in both schools and colleges could greatly increase the effectiveness of their work and widen the experience of their pupils by employing as fully as practicable the very wide range of aids now available. Wallcharts and models, films and film-strips, radio and television, tape-recorders and a wide variety of other aids may be used in almost every subject to supplement the teacher's own resources, to provide the young people with experience which they cannot readily gain directly and to introduce topics which may otherwise have to be omitted from the programme of work. Teachers should be enabled through courses and demonstrations to keep up to date their knowledge of these aids and of the best ways of using them. In not a few secondary schools good libraries have been developed and are used to advantage in the teaching of a number of subjects; in colleges of further education there is generally considerable scope for the development and wider use of the library. We note with interest the experimental work which is being done in Scotland, as in other parts of the United Kingdom, in the development of programmed learning and teaching machines, and hope that, when these techniques are further advanced, teachers will be ready to employ them in the fields of education which we are discussing.

Advantages of the methods advocated

102. Many teachers are concerned lest the extensive use by them of the methods of teaching which are recommended above should lead to less effective progress. The evidence which has been presented to us confirms us in our view that this concern is groundless. The acquisition of skills and knowledge may sometimes appear to take place at a slower pace, but there can be no doubt that the knowledge acquired is more firmly established, the things learned are more closely related to their use in everyday life, and the pupils have been trained to learn to do things by themselves. Young people taught by these methods become keen and interested, unwilling to be passive, and are ready to take up new interests and activities. These methods appeal to young people and generally lead to improved attitudes and conduct and an added willingness to continue their education.

VI. Informal Education

103. Informal aspects of education receive a great deal of attention in secondary schools, both within and outside the normal curriculum. Embracing as they do a wide range of recreational, social and cultural activities, they are generally popular with pupils and make a most important contribution to their all-round education. They also help the schools to promote one of their major aims, to provide their pupils with worthwhile interests which can be continued and developed in post-school life.

104. Informal activities cater for a great variety of tastes and therefore take many forms. Sports and team games are prominent. Camping, trekking, field study and courses of the " Outward Bound " type provide for the outdoor interests of many pupils; a growing number participate in the Duke of Edinburgh's Award Scheme. Clubs and societies based on hobbies such as photography, model-making, crafts, music and drama satisfy a wide variety of indoor interests, and many boys and girls find an outlet for their energies in activities connected with school councils and prefect systems, the production of school magazines and a whole range of school functions. More and more schools are seeking to enlarge the experience of their pupils through local visits, longer excursions within the United Kingdom and tours abroad.

105. It is important that students in colleges of further education should be enabled not only to continue and develop interests which were first aroused in the secondary school but also to form new ones. Much the greater part of the further education undertaken by the least able boys and girls will, indeed, take the form of informal activities. In the colleges, facilities for these activities will have to be provided not only within the curriculum of courses of general education but also as extra-curricular extensions of vocational courses. The appropriate college staff should make sure that new students, when enrolling, have their attention drawn to the facilities offered.

106. These facilities should be sufficiently varied to enable students to carry on and extend the range of interests which are provided for in schools. The needs and resources of young adults are, however, different from those of young adolescents in school. Some of their interests will continue to develop in their old form or will become dormant; others will develop in new forms; and completely new interests will emerge. Students should be given freedom to choose their own activities and interests, and, given the necessary facilities, they will expect, and will be able, to organise their own informal extra-curricular affairs with relatively little help from the staff. Students' Representative Committees which have been appointed in several colleges have been very helpful in promoting these activities. Arrangements of the kind we envisage are already to be found in a number of colleges and have met with a good measure of support from the students.

107. The extent to which colleges of further education can provide for informal activities is limited at present by lack of resources and of members of staff able and willing to take an interest in them. They also experience difficulty in creating a corporate feeling when most of their students attend part-time courses and have their time in college fully occupied with organised studies. Informal education can probably be developed furthest with students who are taking full-time, sandwich or block-release courses. Nevertheless, the opportunities open to day-release and evening students should by no means be neglected.

Experience has shown that much can be done for them where student societies are encouraged. The mid-day break has been found in some colleges to provide a very convenient meeting time for clubs or societies in which part-time students participate.

THE YOUTH SERVICE

108. We are aware that, in the past, many young people have not undertaken any further education at all, whether formal or informal; and, although we should hope that the number will steadily decrease, it appears likely that during the next few years many will still not be persuaded to pursue their education. This consideration leads us to stress the very valuable contribution which the youth service, comprising both voluntary and statutory organisations, can make to the development of leisure-time activities among young people who have left school. Much has been done to focus attention on the vital importance of social training to the community by the Standing Consultative Council on Youth Service in Scotland, which, under Lord Kilbrandon, has been very active in promoting provision in Scotland. We can only express our undivided support of the efforts which are now being made to build up the youth service in terms of staff and facilities. Nor should the contribution made by individual firms be forgotten; some of them establish and maintain their own private clubs for the social and recreational activities of their employees, young and old alike, while others give financial support and encouragement to local social and recreational clubs of which their employees may be members. Many firms have shown their interest in and support for the informal aspects of education by sending their young employees to courses of the kind conducted by the Scottish Council for Physical Recreation.

SPECIAL STAFFING

109. Staffing is an equally important consideration in securing effective co-ordination in this sphere. Initial responsibility for organising the informal side of education in schools and colleges lies generally with the teaching staff. As many members of the staff as possible should be involved in this important work; but there are limits to what teachers can do, and there may be a good case for appointing to both schools and colleges additional members of staff with a particular responsibility for organising the informal activities. Appointments of this nature have already been made in certain colleges. We understand that, in some parts of England, schools have their own " teacher leaders " with responsibility for extra-curricular work within the schools. In Scotland at least one education authority has appointed youth service experts to the staffs of its technical colleges, where they help to encourage—with results which so far seem successful—the extra-curricular activities of the students. *We recommend that the appointment of staff of this kind should be extended in both schools and colleges.*

VII. The Guidance of Pupils

110. We have already pointed out the importance of satisfactory processes of selection of recruits by industry. We have also emphasised the need for sound vocational guidance in school. In the following paragraphs we consider more fully some measures which should be taken to strengthen the educational and vocational guidance given to school pupils.

111. Vocational guidance should not be postponed until the later stages of secondary education, nor should it be left to chance. It should be developed gradually and systematically by building up the pupils' knowledge of appropriate careers and eventually of their own capacities and interests in relation to them. They may obtain a general knowledge of a variety of occupations through local studies and through the observation at work of people, such as shop assistants, transport workers and policemen, whom they see daily. Most subjects of the curriculum offer opportunities of increasing knowledge of different careers, and these opportunities should he accepted as frequently as possible.

112. At a much earlier stage than is normal at present, probably at the heginning of the second year, pupils should he encouraged to consider the major questions that arise when they come to decide what sort of job they would like to take up. Do I want an indoor or an outdoor joh? Do I prefer to work with people or with things? What do I like in any particular joh? What are the conditions of work, the pay and the prospects? What training and further education would I need, and what standards would I have to reach in order to get on? From the answers to questions such as these the pupils can he led to consider their personal capacities and interests in relation to different kinds of occupation. It should he kept in mind that the aim is not only to provide an adequate hackground of knowledge from which pupils may make sensible decisions when the time comes to choose an occupation but also to assist the school in guiding pupils into appropriate courses in the later stages of their secondary education.

113. If guidance is to he given the serious attention which it requires, the schools will have to allow time for the necessary activities and studies and to plan a more extensive and systematic use of existing sources of information. Pupils should be encouraged to seek information from the pamphlets and other publications in a careers section of the school lihrary or a special careers room. Material for discussion and talks may be supplemented substantially through the use of suitahle films, film-strips and radio or television broadcasts. The youth employment officer should be invited to give introductory talks to all pupils on the vocational opportunities of the area and on careers in general, and both he and specialists from industry and commerce might be asked to talk to pupils who have a special interest in a particular occupation or group of occupations. Teachers from further education could help by giving information about the courses of further education associated with these occupations. Most secondary schools send parties of pupils, accompanied hy a teacher, to visit industrial estahlishments. The usefulness of these visits is greatly increased if they are carefully prepared by preliminary work in school. As part of their vocational guidance programme, more schools might try to arrange for firms to give to pupils whose views on a future occupation are heginning to crystallise the opportunity of experiencing the actual work and working conditions in sectors of industry which interest them particularly. The numher of pupils who visit a particular firm at the same time should he small enough to allow them to gain a reasonable knowledge of the work and working conditions. The experience of pupils on these visits and their reactions should be discussed fully when they return to school.

Form teachers

114. Every teacher has an important part to play in the guidance of pupils towards the choice of a suitahle vocation. Each class should, however, have

one teacher who will not only teach a particular subject or subjects but will also be responsible for knowing as much as possible about each of the pupils. A previous Working Party, in its report on the Curriculum of the Senior Secondary School, recommended the appointment of teachers with this kind of responsibility. If class or form teachers are necessary for pupils in Certificate courses—and we agree that they are—they are even more necessary for the pupils with whom we are concerned. One teacher should, in relation to each class in a school, possess very extensive knowledge of the educational progress, the general health and other physical attributes, the home circumstances and the special personal problems or difficulties of each pupil. This would be facilitated if teachers continued to be responsible for the same class over a number of years. The form teacher should be one of the main links between the school and the parents. It would be to him that the pupils would naturally turn for advice and guidance on any kind of personal matter, and his all-round knowledge of each of them would enable him to give valuable advice on all matters pertaining to their allocation to courses in school and their choice of careers at the school leaving stage.

115. The allocation of responsibilities of this nature to members of school staffs would not, however, of itself be sufficient. While the form teacher and other members of staff have their part to play, vocational guidance is too highly skilled and specialised a matter to be left to them alone. The person who is responsible for planning and putting into operation a programme of vocational guidance must not only have at his disposal complete knowledge of the pupils' courses and reliable assessments of their progress and of their personal attributes, but must also have full knowledge of a wide range of occupations and of the further education associated with them. The volume and variety of the work which this entails will vary according to the size of the school roll and the range of ability which the pupils represent.

Staffing

116. Education authorities should provide such staff as is necessary to enable all pupils in every secondary school to receive satisfactory advice about careers and, from the beginning of the second year of their courses, regular personal attention in the programme of vocational guidance. Though some part of the work connected with the programme properly falls within the sphere of youth employment officers and some within that of teachers, there is a substantial part which may well fall within the sphere of either. Some education authorities may, therefore, make the necessary provision mainly by expanding their Youth Employment Service through the appointment of additional youth employment officers. In areas where the education authority does not conduct its own Youth Employment Service, it may have to negotiate with the appropriate authority for the requisite expansion of the service. Some education authorities may, on the other hand, make provision mainly through the appointment of careers masters or mistresses to their secondary schools. Others still may appoint careers masters and mistresses to their larger schools only and complete their provision through the appointment of additional youth employment officers. Any teachers appointed as careers masters or mistresses should be given an early opportunity of attending a short course of training in vocational guidance.

Allocation of responsibilities

117. There are various responsibilities and duties which must be shared among those who take part in the programme of guidance in the school. The whole programme within the school must be organised and supervised. Someone must make sure that the pupils receive adequate and up-to-date information about careers and further education, are given the guidance which should enable them to make sensible decisions about their courses in school and the careers to which they lead, and are helped to secure suitable employment. Someone, too, must be responsible for the preparation and maintenance of records and reports concerning individual pupils and for building up an intimate and personal knowledge of the capacities, interests and personality of each. The supply of films and publications to the school must be organised, and arrangements must be made for pupils to visit industry and colleges of further education and for representatives of industry and of the colleges to visit the schools in order to talk to the pupils. The whole programme of guidance in the school—and in the schools of an area—will have to be co-ordinated so that employers and others who co-operate in it are not unduly inconvenienced by the demands that it makes on them. The careers of young people after they leave school should be followed up in order to obtain information which will enable the school to judge the efficacy of its programme of guidance and the accuracy of its general assessments of pupils and to improve them in the light of experience. Someone must establish direct contact between the school and industry, commerce and further education.

118. It is for the headmaster of each school, after consultation with his staff and the youth employment officer, to allocate these responsibilities and duties as effectively as possible. If the staff includes a careers master he will clearly be assigned most of the direct responsibility, acting in close association with the youth employment officer. Where there is no careers master, some additional work may have to be undertaken by the youth employment officer; since he is not a member of the school staff, however, a good deal will be clearly outwith his scope and will, therefore, have to be shared by the headmaster and the teachers. Whatever the arrangements may be, form teachers of the kind described in paragraph 114 must clearly have a key part to play in the guidance of pupils and much of the work will have to be performed in close co-operation with them.

Co-operation of parents

119. The introduction into the schools of courses with vocational relevance of the type which we have advocated should make it easier for the schools to enlist the interest and the co-operation of parents. Many parents already co-operate adequately with the schools; but all should appreciate that they can give valuable help, not only by providing really relevant information about their children but also by influencing them to persevere with their education. Some parents may, of course, have to be encouraged to adopt a reasonable attitude to their children's prospects, for example by matching their ambitions to their children's real capacities and interests or by discounting the short-term financial advantages of some occupations in favour of the long-term prospects of others. At regular and frequent intervals throughout their children's schooling parents should be given a clear picture of their capacities and prospects. Talks about careers and interviews at which the attendance of parents is specially

desirable should be arranged at times to suit them. When parents see that secondary education has a real purpose and that it leads naturally into what ought to follow, it should become easier to extend and prolong their interest in the training and further education which their children will undertake after they leave school.

Records and reports

120. Information about boys and girls which may be found useful in placing them in suitable occupations and in appropriate courses of further education is transmitted most conveniently to youth employment officers and college principals by means of school leaving reports. Most college principals find that the information which they receive is quite inadequate and would welcome an informative report which would enable them to help young people not only to start their further education in suitable courses but also to succeed in them. We have considered, therefore, the form that a school leaving report which would satisfy the needs of college principals might take.

A new school leaving report

121. The report should provide as much reliable information about the young person as the college principal may find useful, and, in view of the nature of some of the information, it should be a confidential document. It should not be elaborate and the information should be presented in such a way that the college principal may have an assurance that the standards of assessment in one school are reasonably comparable with those in another. The report should be designed so that teachers may complete it with the least effort consistent with its purpose. While the report should consist essentially of an evaluation of the pupil at the end of his or her schooling, regard should also be had to the pupil's performance throughout the course. The young person should be assessed in relation to his own class or group in school, and this class or group should be placed in relation to the whole age group in the school to which he belongs.

122. The report should set out as clearly and concisely as possible the pupil's educational attainment: the general type and level of the secondary school course or courses which he has followed; a subject-by-subject assessment of his attainment at the time of leaving school; and a record of any external or internal certificates or awards gained by him. This section of the report might be completed by a suggestion as to the type and level of course of further education from which, in the opinion of the school, the young person seems best fitted to profit. His physical record should include an assessment of general health and vitality and a note of any particular physical attributes which may be pertinent to his or her fitness to follow certain occupations or courses in further education. Any marked bias in the young person's aptitudes should be noted. Membership of any club, society or youth organisation, either inside or outside the school, and the nature of any other interests and activities should be recorded.

123. We considered at length whether the school leaving report should include information concerning personal qualities. The comments and observations which we have heard make it clear that a knowledge of certain personal qualities of students can help college teachers considerably in their dealings with them. For example, it would be useful to include in this section of the report infor-

mation about such matters as the young person's appearance, manner, attitude to and capacity for work, relations with contemporaries and others, and general disposition. This more complete record would be of particular help to the college staff when the progress of a student gives them cause for concern. The recorded information should be based on the widest evidence, the observations and considered judgments of all the secondary school teachers with whom the young person has been in lengthy contact.

124. A form of school leaving report which seems to us to satisfy the various requirements discussed above is illustrated in Appendix 2. In order to avoid a multiplicity of forms, the report is designed to apply to all secondary school leavers, some of whom are not our direct concern. *We recommend that all education authorities should adopt a school leaving report which, though it may differ in form, will be on similar lines to the one illustrated and will contain the same essential information for transmission to the principals of colleges of further education.*

Form Y 15

125. The confidential school report, Form Y 15, which was designed to provide essential information about young people for the Youth Employment Service, is used in some areas but not in others. Even in those areas in which the report is used, youth employment officers generally find that the information which it contains is inadequate and they supplement it to a greater or less extent through oral reports from the young person's headmaster. We should hope that, eventually, in the interests of economy of effort in the schools, the proposed new school leaving report would be used also by the Youth Employment Service in place of Form Y 15.

The pupil's progress record

126. The information which is required for the completion of the school leaving report should be obtained from some form of record of the pupil's progress in the secondary school. In our view, the best means of making sure that such a record of progress will be kept is to prescribe a form nationally. The present Pupil's Progress Record may serve a number of purposes, some of which are not our immediate concern, and we shall not, therefore, comment on it in detail. There appears to us, however, to be a good case for reconsideration of the form of the Pupil's Progress Record in order to take account of changed and changing circumstances both inside and outside the schools. In any review of the Record we would hope that the requirements of the proposed new school leaving report would be given due consideration.

Placing in employment and further education

127. The whole process of guidance and assessment of pupils and of reporting on their educational progress and personal attributes is aimed at enabling each of them to enter employment and further education appropriate to his or her capacities and interests. All the efforts of the schools to this end will be frustrated if the representatives of industry, commerce and further education, when they are recruiting young people, do not take full advantage of the information available from school reports by seeking the advice of headmasters and youth employment officers. When young people wish to enter full-time pre-employment courses in further education directly from school, the college

principal may consider it desirable to interview them individually in the presence of their parents before he takes any decisions; full use should be made of the school leaving report and its introduction should, in our opinion, make it unnecessary for colleges to set their own entrance tests. There would be considerable advantage in associating representatives of the schools as well as of the Youth Employment Service, industry and commerce with the selection procedure. Something of this kind is done in a few areas; the practice might well become more widespread.

128. By following similar selection procedures and collaborating closely with the schools, the colleges and the Youth Employment Service, employers would help to build up a satisfactory system of transfer of young people from school to employment and the associated further education. Employers should be encouraged, through their own organisations and by direct appeal, to adopt some such scheme.

VIII. Examinations

129. Very firm and widely divergent views have been expressed to us about the part which examinations and certificates below the level of the Scottish Certificate of Education should play in the co-ordination of secondary with further education. These divergent views are generally influenced by individual attitudes to examinations in general. Many people believe that the surest and easiest way of obtaining essential information about the abilities and the educational attainment of pupils is through examinations which are controlled by examining bodies outside the school. Others maintain that external examinations are unnecessary and that the most satisfactory means of ensuring the successful transfer of pupils from school to employment and further education could be provided by wholly internal assessments of the pupils together with close consultation among the interested parties.

130. About one third of the education authorities in Scotland award no certificates to pupils leaving after three years of secondary education; another third award certificates based on the internal assessments of the schools; and the remaining third have some form of externally controlled examination, on the results of which certificates are awarded on a single pass level or on two levels, pass and credit. Where there are common examinations in the schools of an area, the papers are generally set by panels of teachers employed in the area. The proportion of candidates who receive certificates varies greatly from one area to another; in some, these examinations cater for only the ablest, who form a small proportion of those who are our concern, while in others most of the age group are involved and about half of them receive certificates.

Internal examinations

131. In order to make sure that their programmes of work are planned and carried out effectively, teachers regularly assess the ability and progress of their pupils as the course proceeds. These assessments are based to some extent on the pupils' performance in the general work of the course and in particular sections of it as they are completed, but also in some measure on more formal examinations at the end of each term or session. The teachers are free to adapt these examinations to the work of the term or session and need not let them determine the work which the pupils are asked to overtake. Their broadly-

based assessments of pupils are generally more reliable than assessments based on a single examination, but there is bound to be some variation of standard between one school and another. These variations and their consequences might be reduced through discussions among schools in each area and through comparison of the results subsequently achieved by pupils in further education and in employment. This is but one aspect of the consultation and co-operation that are required but are as yet practically non-existent.

132. The more formal internal examinations which are set in the large majority of secondary schools tend to follow too closely the pattern and type of examinations which have been traditionally associated with the Scottish Leaving Certificate. There is great need for experiment with forms of tests which are more in keeping with the methods of teaching and learning which we have recommended, which take into account the more limited verbal resources of the pupils. We are aware that such tests may be difficult to organise, may involve much individual testing of pupils and may therefore be very time-consuming. We strongly recommend, however, that experiment and research be undertaken as soon as possible to devise tests which are not only educationally suitable but which may be put into operation without undue difficulty.

External examinations

133. In certain areas the headmasters and teachers have expended a great deal of effort on local external examinations, and some of them attach great importance to their stimulating effect on both pupils and teachers. In favour of these examinations, it is said that pupils readily appreciate the goal of a certificate which is awarded on the results of an external test, and the purpose which it seems to give to their course encourages them to work with greater keenness; that some teachers are induced to work harder when there is an external examination to be prepared for and are encouraged by the better response of the pupils; and that more pupils, attracted by the award of a certificate for the successful completion of a course, remain at school beyond the age of fifteen. Further, it is claimed that local external examinations provide the standard measure of ability and educational attainment which is requested by employers and teachers from further education and that they add to the prestige of schools which at present do not present candidates for national examinations.

134. Against this it is asserted that, inevitably, the curriculum tends to become distorted by pre-occupation with an external examination; too much importance is attached to the examination syllabus, and time and attention are devoted to what is likely to appear in the examination to the neglect of other elements of the curriculum which may be of the greatest importance educationally; and methods of teaching and of learning which will best serve the immediate purpose of passing in the examination are used to the exclusion of methods which have more to commend them educationally. The spread of ability among these pupils is very wide and if all, or even most, of them are to be prepared for the same examination, many of them must be receiving an inappropriate education. If, on the other hand, only a minority are to be prepared and presented, then the existence of the examination will have a depressing effect on the majority.

135. We believe that pupils can be stimulated to give of their best by the types of courses which are discussed in section IV without the complication of

an external examination. The process of establishing common standards for schools which contain widely varying sections of a wide range of ability and which function under a wide variety of environmental, staffing and other conditions could easily be carried too far to the detriment of many schools. No worthwhile hody of experience has been huilt up of the predictive value of an examination at this level. There is a danger that too much attention might be given to a certificate that is awarded on the results of an external examination with consequent neglect of other important factors such as qualities of character, way of living and conditions of employment.

136. An external examination at national level for pupils who leave school at the end of three-year secondary courses would go far beyond any need for a common measure of assessment of pupils at this level. The distorting effect of such an examination on the curriculum and on the teaching of individual suhjects would almost certainly be very much to the disadvantage of the majority of pupils. There is little real evidence that pupils, parents, teachers or employers desire such an examination. *We recommend, therefore, that there should be no external examination at national level at the end of three-year secondary courses.*

137. We have reviewed a numher of other possihle types of external examination which might influence the transfer of pupils from secondary schools to further education and employment:

(a) Certificates are awarded hy certain independent examining bodies on the results of their own examinations. Teachers from secondary education play no part in deciding the content of the syllabuses, in the setting of the examination papers or in assessing the candidates. Some pupils who do not follow courses leading to the Scottish Certificate of Education take these external examinations. The numher of pupils concerned in Scotland is so small, however, that the examinations do not constitute a serious problem in secondary education and do not influence appreciahly the co-ordination of secondary education with further education.

(b) In some local areas external examinations based on common syllahuses and common papers are provided. These exhibit some of the merits and defects of external examinations which are discussed in paragraphs 133-135. The predictive value of these examinations is small, partly because their pass-fail nature does not enable them to be tied to the grades of courses of further education or of posts in industry or commerce. Their usefulness in selecting recruits appears to be confined to the ahlest pupils and to a few posts at a relatively high level.

(c) An internal examination, set and marked within individual schools, but controlled by some form of external assessment in which schools and colleges of further education would co-operate, seems to us to have certain advantages over the wholly external examination. A common measure of assessment would be established in the schools of an area and there would be less danger of distortion of the curriculum and the work of the schools.

138. Our consideration of these possibilities has led us to no firm conclusion ahout the desirahility or otherwise of external examinations at local level. In particular, we are influenced by the fact that no convincing body of experience has been built up in the use of external examinations to estahlish close co-ordination of secondary education with further education, nor to show that all the people concerned may he encouraged to develop the kind of co-operation

which would obviate the need for any form of external assessment of pupils. We recommend that definite efforts should be made by education authorities to obtain the necessary evidence on which decisions on these matters may be based.

139. We summarise our recommendations in respect of external examinations at the end of three-year secondary courses as follows:

(i) *There should be no national examination at the end of three-year secondary courses.*

(ii) *Education authorities which already hold some form of external examination should (a) give great weight to teachers' estimates and use the results of the examinations for the purpose of standardising the assessments of their schools; (b) tie their assessments closely to the grades of courses of further education and of posts in industry and commerce; and (c) seek evidence of the efficacy of their system by correlating their assessments of individual pupils with their subsequent progress in employment and further education.*

(iii) *Other education authorities should be encouraged to develop in their schools a system of internal assessment of pupils in close co-operation with the other interested parties. They should also seek evidence of the efficacy of this system.*

(iv) *After a few years, the available evidence should be placed before education authorities so that they may decide whether or not to dispense with external examinations at this level.*

External examinations at age sixteen

140. The question of an external examination at age sixteen after a four-year course at a level below the Scottish Certificate of Education also requires to be considered. The general points which are discussed in the previous paragraphs are equally applicable to four-year courses. We have also taken cognisance of the recommendation of the Secondary School Examinations Council that a national examination at age sixteen at a level below that of the General Certificate of Education should be introduced in England. Conditions in Scotland, however, are very different from those in England. The proportion of pupils who remain at school to the age of sixteen in courses below the level of the Scottish Certificate of Education is as yet relatively small. The schools which have most of the sixteen-year-old pupils are still busy coping with the many changes necessitated by the recent introduction of the Ordinary grade of the Scottish Certificate of Education; to ask many of them to face up to another new—and presumably very different—examination at this juncture would be very unwise. For the time being, liaison between the schools, colleges of further education and industry affecting this comparatively small group of pupils should be easy to arrange and should suffice to ensure their smooth transfer to employment and further education. The question of such a national examination might well be reconsidered after the schools have built up a body of experience of extended courses and of the new Ordinary grade examinations for the Scottish Certificate of Education and their effects on the work of the schools. *For the present, however, we recommend that there should be no national examination at a level below that of the Scottish Certificate of Education for pupils aged sixteen.*

A certificate at the end of pre-apprenticeship courses

141. We have considered also the recommendation of the Pre-Apprenticeship Courses Committee of the Scottish Technical Education Consultative Council

that a nationally recognised certificate which could be issued on a local basis should be given to all students who have satisfactorily completed a pre-apprenticeship course. In making this recommendation the Committee was actuated by a laudable desire to give to all pre-apprenticeship students a clearly recognisable goal, and to provide a basis for remission of some part of their apprenticeship in respect of earlier study. It will be apparent from what we have said in this section of our report that we are not generally in favour of examinations and certificates at this early stage for the young people who are our concern, and we seriously doubt whether a certificate of the type suggested by the Committee is really necessary. It would seem to us that sufficient incentive should be available to the students in entry to the employment which will follow on their courses. Moreover, as we have already noted in paragraph 76, exemption from the first part of certain City and Guilds of London Institute courses and examinations can be granted to students who have made adequate progress, and this possibility should provide an additional incentive. The very granting of this exemption would, we believe, largely serve the aim of the Committee by attesting the achievement of something which could well be regarded as a minimum national standard. If, however, those who have experience of pre-apprenticeship courses are convinced of the need for a certificate of the kind proposed by the Committee, we would not wish to set ourselves up in opposition to them. We would, however, suggest that, if this certificate is introduced, the same attitude should be adopted to it as to other certificates with which we have dealt in this section, namely, that experience with its award should be kept under careful review so that a decision can be taken after a period of trial whether or not it could be dispensed with.

IX. The Less Able

142. There is in our secondary schools a fairly substantial number of boys and girls who are in the lower range of intelligence and whose low level of attainment poses special educational problems. We have therefore decided to devote some attention to these young people as a group and to consider the type of education that they should receive in school and the arrangements that should be made for their further education after they have left school. As a rule, the employment which these boys and girls take up covers a wide range of work of an unskilled or semi-skilled character, for only a very small proportion of which systematic industrial training and vocational further education are as yet provided. When they first leave school some of them enter on jobs, for example as message boys or girls or as van boys, which are of a temporary nature; many of them eventually become general labourers, while others are employed in transport services or as factory hands, operatives or machine-minders. The tendency is for many to move between different jobs on this level, especially in the first few years after leaving school. We are particularly concerned here with those young people who find themselves in jobs which are usually unprogressive and who, because of their limited attainments and abilities, are likely to remain at that level of employment during their working lives.

Background of the group—social, educational and vocational

143. Even the kindliest and most responsible parents have difficulty in providing the particular kind of guidance which less intelligent youngsters need during the

naturally unstable period of adolescence. Some parents unfortunately take little interest in their progress and welfare and fail to provide any steadying influence. As a consequence, many of these boys and girls lack a sense of security; this becomes as often as not the key to the whole pattern of their behaviour, the background to their thoughts and actions, and lays them open to the less creditable influences of modern society. It also forces them often into undesirable kinds of group association, leading into the gang with its conventions, loyalties and activities, which can be quite anti-social.

144. From an early stage in his schooling, the less able child meets with failure when (as so often happens) he is confronted with the same tasks as his abler fellows, and unless steps are taken to counter his sense of failure and the resulting mood of hopelessness he gives up the unequal struggle. Many factors, both inside and outside the school, contribute to that growing sense of failure and frustration, and the unfortunate pupil, once he has fallen behind, tends to fall further and further back. Frequently, by the time he has reached the leaving age, his standards of attainment are very low, even in the basic skills of reading and writing; moreover, in some circumstances, his behaviour gives cause for concern. He leaves school glad to be rid of education; indeed, he turns his back on it, having developed a dislike which may harden into a life-long prejudice.

145. It is not accurate to characterise as completely unskilled all of the great variety of jobs taken up by young people of lesser ability. The operations involved are very limited as a rule, and the technical knowledge required is not extensive. The work is often repetitive and intellectually undemanding, especially where production processes are to a large extent mechanised, and to the outside observer it may appear monotonous. The young worker himself, however, accustomed to carrying out processes almost automatically and without any need to think, does not necessarily find his work monotonous; he may even gain some satisfaction simply from doing a task which is within his capability.

146. In some industries, as production processes become more highly technical or mechanised, the need for the almost completely unskilled worker is in fact diminishing. A small number of operatives find themselves concerned with more complex and valuable equipment, the operation and care of which requires training and a technical background, albeit at a relatively low level. In other cases, the application of "work study" or "organisation and method" techniques requires the worker to follow carefully designed procedures. Over the whole range of work for which the less able boys and girls provide the main source of recruits, there is thus a wide variety of occupations extending from the almost totally unskilled to those which impose demands of skill and understanding approaching those of a craft. Within this range of work a hierarchy of jobs sometimes exists in a single firm, and there is an opportunity for the young workers who profit most from experience and training to make progress.

147. Generally speaking, very little systematic industrial training is provided for unskilled or semi-skilled workers. Further education is provided on an even smaller scale and many firms, besides seeing very little need for further education for these workers, doubt whether worthwhile courses could be devised. We do not subscribe to these views in respect of either the technical or the general education needs of these young people and we return to this subject in paragraph 152. So far as industrial training itself is concerned, progressive firms, aided by the results of research in this field, are finding that significant advantages in speed of training and degrees of skill attained may be gained

by the application of modern methods to operative training. This is especially true where manual and digital dexterity are involved. Other advantages accrue from instruction by the firm on its organisation and system of communications and on accident prevention. It is to be expected that the application of such training arrangements, with complementary further education, will become more general as effect is given to the policy outlined in the White Paper, " Industrial Training: Government Proposals " (Cmnd. 1892). Experience in a number of continental countries has shown that the multiplicity of occupations for which training is required need not be an insuperable obstacle.

Secondary education for the group

148. Broadly speaking, the aims of the school in its work with less intelligent pupils are no different from its aims with other groups. It is the responsibility of the school to develop, within the limits of each pupil's ability, some facility in self-expression both in speech and in writing, some skill in calculation, some understanding of the environment, some appreciation of the arts, and some enjoyment of creative and purposeful activity. Measured in these terms, the simple object of the school is to provide for the less able, as for other pupils, what is vaguely known as " a good general education." The representatives of industry whom we interviewed invariably regarded " a good general education " as the best preparation which the less able boy or girl could be given in school.

149. There is ample evidence to show that the schools are not always successful in carrying out this aim with the less intelligent, too many of whom leave school quite inadequately equipped for beginning their working lives. But this is not to overlook the efforts—some of them remarkably successful—of those teachers in various parts of the country who are devoting much attention to the education of less able children, and who have shown what can be done with a proper degree of sympathy and understanding for a group of young people who are more sensitive to neglect than most. The aim should be to apply their methods more widely. This will involve in many schools a re-appraisal not only of what is to be taught but also of methods of teaching it.

150. Those elements normally included under " general education " should retain their prominent position in courses for the less able. The level of attainment to be expected in any part of the work should, however, be related to the ability of each pupil; within this limit the teacher should seek to obtain from him the highest standard of performance of which he is capable. The ability to work steadily and with interest, and the qualities of reliability and dependability which are so important in life after school, can be developed if the best that he can attain in work that is clearly within his compass is constantly demanded of him in school. The element of challenge must always be present, but at the same time there is no point in asking for what is clearly beyond his reach.

151. We would endorse very heartily the opinion that is being more and more widely expressed nowadays, that the curriculum is divided up into too many water-tight subject compartments. The educational disadvantages of presenting subjects in isolation are obvious, especially where less able pupils are concerned, and the number of teachers who are concerned with them should be kept to a minimum. Everything which these young people are taught should be related to themselves, to their environment and to what they may do after they leave school. We have no reason to believe that the vocational interest is any less

marked for them than for other boys and girls, though it will have to be developed in a rather different way and at a rather different level. Courses of the type that we have advocated, but specially designed for this group, are just as appropriate for them as for abler pupils. Hobbies periods, which have already proved successful in a number of secondary schools, are one means of harnessing their interest; at the same time, they provide a useful lead into leisure-time activities. Less able boys and girls should, like their abler fellows, be given responsibilities and privileges in different school activities, especially on the extra-curricular side but also, for example, in the choice of an optional study in their school courses.

Further education for the group

152. As we have already mentioned, there is as yet very little demand for further education for the less able and as a consequence very little provision has been made. This is a serious gap which we view with some concern, since their need for further education is no less than that of more intelligent young people. The kind of further education, like the kind of secondary education which has preceded it, will, however, have to be different, both in its approach and presentation and in the extent of its technical and general content.

153. The somewhat pessimistic view has hitherto been held that the only jobs which these young people were capable of filling were of an almost totally unskilled character, and that to attempt to provide them with a technical education would be a waste of time and of effort. Whatever may have been true in the past, however, this is certainly not true nowadays. We have already shown that there is need in the industrial field for fewer general labourers or general duties men, and more need for men and women with skills in narrow fields and some awareness of what is going on in industry and in society at large. It has in fact been found that a surprising number of occupations which cannot be described as "skilled" have a specific technical content and background which together provide an adequate basis for an interesting and vocationally relevant part-time course of further education of from one to three years' duration. The City and Guilds of London Institute has endeavoured to cater for this new situation, and we have noted with considerable interest the development over a number of years by the Institute of courses at this level which have been generally described as " operatives' courses " to distinguish them from craft and technician courses. There are now over a score of operatives' courses which cover a wide range of industries. These courses, and the related examinations, have to be very carefully devised to take into account the educational limitations of the students and to relate the technical content very closely to their daily tasks in factory and workshop. The teaching also has to have a special quality; extensive use has to be made of visual and other aids—which may be provided by industry—and more reliance has to be placed on annotated diagrams than on extensive written work. Where such considerations are borne in mind, and especially where there is full industrial backing, the courses can be an undoubted success, not only technically and industrially, but also in the real educational progress that students may make through progressive study at a level and in a situation carefully matched to their needs. *We recommend the more widespread use by firms and industries of operatives' courses of the type we have described and an expansion of such provision wherever possible to cover a much wider range of occupations at this level.*

154. For a proportion of the less able, however, a vocationally centred course would be inappropriate and further education must aim at their general development as persons. It will admittedly be no easy matter to devise suitable courses, and much trial and error will probably be required before courses and methods of teaching will be found which have the right appeal. We have, however, been encouraged to learn of the success already achieved in this field in certain colleges where general courses, including basic and optional subjects, are provided. The basic subjects vary from one course to another but generally include spoken and written English, social studies, calculations and physical education. The range of optional subjects offered has so far been determined largely by the interests and qualifications of the staff; but these have been broad enough to provide something which appeals to most of the students. The method of presentation of the various subjects generally bears little resemblance to the instruction given in the same subjects to abler students, especially if they are aiming at public examinations. This is the kind of approach which we would like to see used more widely. On general grounds we see advantage in running courses for the less able so far as possible in the same colleges as cater for abler students, provided suitable staff can be recruited with the right outlook and a special interest in the needs of these students.

Informal activities

155. A very important link between secondary education and further education for the less able can be forged through informal and cultural activities which may not necessarily be carried on as part of an organised course. The interests in hobbies or in activities of a broadly cultural or physical character which have arisen in school should undoubtedly be continued and developed as far as possible in informal further education. The importance of these informal activities for less able young people is very great, and *we strongly recommend that deliberate steps should be taken, not only by the schools but also by employers and by colleges, to encourage them to join youth clubs or other organisations which cater for particular interests.*

Need for pilot schemes

156. If there is to be widespread development in the field of general education at the level which we have been discussing, a systematic approach seems to us imperative, possibly based on initial pilot schemes in a few areas. A number of firms might be invited to allow day-release for all their young unskilled workers. In co-operation with the managements of these firms, education authorities should experiment with courses designed for the young workers in question, and at the same time local youth organisations should make concerted efforts to provide for their social and recreational needs. These various local efforts could be initiated and co-ordinated as part of a national experiment. *We recommend that a scheme on these lines should be put into operation and that, when it has had sufficient time to develop, it should be carefully appraised and the results published.*

X. Machinery for Achieving Co-ordination

157. A definite framework of arrangements is undoubtedly necessary if the close co-ordination of secondary education with further education is to be assured. On a number of occasions the Secretary of State has emphasised the

importance which he attaches to the development of a close relationship betweeu the schools and further education estahlishments. A fully satisfactory response has not, in our view, heen forthcoming, and we think that education authorities must now take positive action to secure the co-ordination that is so clearly necessary. *We strongly recommend, therefore, that education authorities should be asked to review, alone or in co-operation with neighbouring authorities, the relevant machinery in their areas and to make sure that it is capable of dealing with the many aspects of co-ordination to which we have drawn attention; and, further, that after a suitable lapse of time, they should be given an opportunity of reporting to the Secretary of State the nature and the efficacy of their arrangements.*

Meetings and consultation

158. If a direct link between schools and colleges is to be forged, very definite arrangements will have to be made for meetings and consultation hetween the heads of schools and of colleges. The direct contact estahlished in this way should enahle them to agree upon their common areas of interest and to initiate action in connection with such matters as the exchange of information, the co-ordination of courses and the placing of young people in suitable courses. Headmasters and principals will have to carry hack to their schools and colleges the knowledge gained, as a result of this consultation, of the work in each other's field and, hy discussion at staff meetings and other means, to ensure that it is disseminated among teachers at all levels. They will also have to take positive steps to arrange for teachers at all levels to meet each other in order to develop mutual understanding in the interests of their pupils and students.

Governing Bodies

159. We understand that the desirability of entrusting to specially appointed governing hodies the direct management of certain types of colleges of further education is at present under consideration. In our view, a governing body comprising representatives of the education authority, of local industry and commerce, of further education and of secondary education could exercise a very important co-ordinating influence in the fields of education which are our concern. Meetings of teachers and others which are required to deal with certain aspects of co-ordination would gain much from being associated with the machinery of governing hodies. If the appointment of such bodies is accepted in principle, we would hope that they would he appointed for all colleges of further education which offer courses at the levels which we have heen studying. If, however, governing bodies are not to be appointed for colleges, we would urge all the more strongly that education authorities should take steps to estahlish machinery which will be in all respects adequate.

160. Machinery which hrings together representatives of schools and colleges and other agencies concerned with education already exists in area youth employment committees and, in the field of further education, in certain local trade advisory committees and advisory committees connected with pre-employment courses. The work of these advisory bodies in their respective spheres could be made more effective by ensuring that all the various interests are represented in their memhership and that they are encouraged to deal with appropriate aspects of the co-ordination of secondary education with further education.

RELATIONS WITH EMPLOYERS

161. We have mentioned at several points in our report various symptoms of an unfortunate ignorance among secondary school teachers and employers of each other's field of activity and the need for closer relationships between them. Some individual schools have made progress towards a mutual understanding with a few firms through informal contacts and visits. In general, however, headmasters should try to arrange many more opportunities for themselves and members of their staffs to meet and to consult employers and their representatives from both large and small firms.

XI. Staffing

162. The developments which we propose for secondary education and further education will require considerable strengthening of the staffing of both schools and colleges. The full effects of our recommendations will not be felt immediately, however, and the demand for more teachers arising directly out of them will be spread over a number of years. Nevertheless, we appreciate that our proposals may add to the difficulties which are already being experienced because of the serious shortage of teachers in most areas. It is a measure of our belief in the importance of and the real need for the developments which we have proposed that we should recommend them notwithstanding our appreciation of all the difficulties involved.

163. Some schools have shown that courses of the kind which we recommend for the third year of secondary education can be introduced with no additions to their staffs but simply through adjustments of the work which individual teachers do. As the courses develop, however, pressure on the staff of a school will come from several sources. The widespread introduction of a great variety of courses with obvious practical relevance may result in an increase in the number of third-year classes, and more pupils may be expected to remain at school beyond the age of fifteen to complete three years of secondary education and to go on to a fourth year. Classes may have to be made smaller for certain activities in order to permit the adoption of the methods of teaching which we advocate; on the other hand, combination of groups may be possible for others. If teachers are to be allocated special duties in connection with vocational guidance, liaison with industry, commerce and further education, and informal youth activities the actual teaching loads of some of them may have to be reduced. Obviously, more teachers will be required in the schools to meet the cumulative effects of these sources of pressure. *It is, however, our earnest hope that all the changes which seem to us so essential will not be postponed because all the staff that appears to be necessary is not immediately available.* We have evidence which suggests that much can be achieved by redeployment of existing staffing resources within schools; and, indeed, changes have already been introduced in some schools without any increases in their staffs.

164. Further education is today a rapidly expanding service and the effects of our recommendations will be, we hope, to accelerate the rate of expansion at certain levels. As our proposals take effect and as a new outlook on industrial training develops, colleges of further education may expect a rapid rise in the demands for appropriate courses of general and technical education for young people. This will require not only many more teachers with specialist technical qualifications but also, when liberal studies are expanded and interpreted

more widely in vocational courses, many more who are capable of dealing with a wide range of general subjects.

165. Some of the additional commitments in schools and colleges will involve only a few hours of instruction weekly in certain subjects. For example, a secondary school may require the part-time services of a teacher of retail shop practice or of navigation, and a college those of a teacher of a modern language or of art. These needs might be met by a sharing of staff between the college of further education and the local secondary schools which feed it. We are aware that such interchanges of teachers already operate to a limited extent, and education authorities will no doubt expand them as necessary.

Clerical assistance

166. Judging from the evidence we have received, many schools and colleges already require more clerical assistance than they receive, and their needs in this respect will increase if our recommendations are put into effect. The range of educational responsibilities which we envisage for head teachers, college principals and their staffs is so wide that the importance should be recognised of freeing them from unnecessary clerical duties. *We recommend strongly that education authorities should review their existing arrangements for the provision of clerical assistance and should make sure that schools and colleges receive all the assistance, in terms both of amount and of quality, that they need.*

Training of teachers

167. The successful development of secondary education and further education along the lines which we propose will, as we have emphasised at various points throughout this report require a change in the outlook of teachers and in their approach to their work with pupils and students. Teachers in secondary schools, and not least those of practical subjects, will have to seek out the aspects of their particular subjects which have relevance both to the present lives of their pupils and to their continuing needs after they leave school, in employment and in further education, and will have to develop these aspects in their teaching. Teachers in colleges of further education will have to appreciate that their teaching must be based on what their students have done in school and will have to relate what they teach not only to the particular needs of their employment but also to their general needs as young citizens. If all these requirements are to be met, the colleges of education will have to provide appropriate courses for all categories of teachers.

Initial training for secondary education

168. It appears to us inevitable that some change should be made in the initial training of teachers who are to work in the field of secondary education which has been the subject of our study. This training should no longer be regarded as an appendage to training for primary school teaching, but should be given in a full-time course in its own right. It should, in our view, be directed less than it has sometimes been to proficiency in subject specialisms, and should aim more at providing student teachers with a valid conception of the whole aim and purpose of secondary education and of means of providing a suitable education for pupils of different types, and with an appreciation of ways in which their specialisms may fit into an integrated curriculum. It will obviously have to direct the attention of students to ways in which they may fit themselves

to become form teachers of the type we have described in paragraph 114; it will therefore have to show them how to deal with pupils as all-round persons and to interest themselves in their whole background as well as in their school activities. From this point of view, it would seem desirable to give to students training to be teachers in secondary schools some experience of youth work and to provide them with some general understanding of the needs and the organisation both of further education and of industry and commerce.

169. The colleges of education have already made considerable efforts to improve courses within the framework of the existing Regulations for the Training of Teachers. The general conditions under which the Regulations enable the colleges to provide training for teaching in secondary schools are, however, far from satisfactory, and *we recommend strongly that the Regulations should be suitably amended as soon as possible.*

Initial training for further education

170. In further education, teachers are not required by regulation to have followed a course of professional training. In recent years, however, many have taken courses in order to qualify as trained teachers. These courses have varied in their organisation, duration and effectiveness and have been open to criticism on a number of grounds. We have therefore noted with pleasure the recent introduction of a new pre-service and in-service course of professional training for teachers in further education. The course is organised in three successive parts: three months of full-time basic training, followed by a session of supervised teaching in a college of further education, and with a further month of full-time training to round it off. We understand that some consideration of the problems involved in the co-ordination of further education with secondary education is included in the course. We hope that before long at least all new recruits to full-time posts in further education will have the benefit of an adequate course of professional training.

Courses for serving teachers

171. We have been much impressed by the strength of the plea from teachers in both secondary schools and colleges of further education for the provision of a greater number and variety of courses for serving teachers which would deal with particular problems and particular aspects of development within their respective fields. The colleges of education provide each year a substantial number of courses of this nature which cover a wide range of interests. It seems clear, however, that only a part of the total need is being met. Courses are already needed, for example, for teachers who are moving from secondary schools into colleges of further education and who should learn something of the problems of teaching in their new sphere. There is also much need for many more refresher courses to enable teachers to keep themselves up-to-date and to study new developments; for courses for the consideration of problems arising from the introduction of new syllabuses and new schemes; and for courses where wider issues, for example in connection with educational and vocational guidance, which are not confined to the teaching of particular subjects could be studied. It seems clear to us that the developments in education which we have advocated could be very powerfully assisted by the widespread provision of facilities for teachers to study, to discuss and to learn. *We therefore recommend strongly that machinery should be established to enable the colleges of education,*

in association with the education authorities and with all the people in the educational world who are capable of giving help, to determine needs and to provide all the courses that are required. It may safely be assumed that all these courses cannot be organised in holiday periods. We should hope that education authorities will increasingly be willing to facilitate, if necessary during the working session, the attendance of teachers at courses which are designed to increase the effectiveness of their contribution to education in schools and colleges.

XII. Looking Ahead

Raising the school leaving age

172. The Act of 1946 included provision for the extension to the age of sixteen of the period of compulsory schooling, at a date to be fixed by the Secretary of State. It has so far been found impracticable to bring this section of the Act into operation. The Government have, however, accepted in principle the desirability of extending the period of compulsory full-time education, but have as yet been unable to state any date on which, in their view, the extension might become operative. Much preparatory work will undoubtedly be needed if, from the outset, full advantage of the extended period of education is to be gained. Among the essential preparations we would certainly include the devising for the longer period of educational programmes that are both challenging and satisfying to the young people who come within our remit. We have already made it clear that, in our view, the key lies in providing a variety of courses each of which has an obvious vocational motive, and we consider that the prospect of an increase in the leaving age gives even greater force and urgency to our recommendations on the introduction of vocational elements into secondary education. The sooner more vocationally-centred courses are introduced and the greater their variety, the better will be the general provision of education for non-certificate pupils who remain for a fourth year in full-time post-primary education, whether in a secondary school or in a college of further education, and the experience gained will be invaluable when the leaving age is in fact raised.

Compulsory part-time day education to age eighteen

173. Provision for the introduction of compulsory part-time education until the age of eighteen was also included in the Act of 1946, but this provision also has not so far been brought into operation. Government pronouncements have, however, indicated that the raising of the school leaving age to sixteen is likely to be given priority. Our study of the educational needs of non-certificate pupils has led us to the belief that it would be desirable as a first step to require young people to remain in organised full-time education until the age of sixteen, either in school or in college. It seems obvious to us that plans for the development of further education should increasingly be designed to prepare for the day when compulsory part-time attendance will be introduced, and all the recommendations which we have made specifically in regard to further education are not only consistent with such a policy but should indeed assist the realisation of it. The ultimate introduction of compulsory part-time education until the age of eighteen could, of course, be anticipated, and might even be rendered unnecessary, if the proposals in the White Paper on Industrial Training led employers to accept as a duty the principle of day-release for all their young

employees, and, when the young employees have embarked on courses, to allow them day-release until they have completed them. On the purely educational plane, we believe that one of the most urgent needs in further education in preparation for these developments is for experimentation with courses for young workers, girls as well as boys, in occupations which do not require a very high or very comprehensive degree of skill, and for the further liberalisation of vocational courses.

General trends in industry

174. It is common knowledge that industrial practices are changing in many respects. The changes are themselves the outcome of the unprecedented and accelerating pace of research and development and also of the competition for markets. Their magnitude and complexity can, however, be fully sensed only through consideration of many factors, each of which, in varying degrees, may at one and the same time affect the employment situation. Thus, the emergence of a new product or an improved form of an existing product may be made possible by the use of new materials or of a new process or of a new basic scientific concept, or by a combination of two or more of these. In some instances the product may not be significantly changed, but the manufacturing process may be modified to take advantage of new techniques deriving from technological advances. These technological advances, and particularly the introduction of the new techniques which result from them, are reflected in changes on the workshop floor right down to the operative level in industry. The introduction of new equipment, new techniques and new procedures in the fields of commerce and distribution has similar implications for workers at all levels in offices, warehouses and shops. The cumulative effect of the changes is of vast importance at any point in time; but even more profoundly significant in its implications for education and training is the increasing rapidity with which the changes are taking place.

Impact of changes

175. We are certainly not competent to offer original observations on the implications of changes in industry and commerce, particularly in respect of the preparation of workers to meet the changing conditions in these fields; and we labour under the further disability that all the evidence, oral and written, which we have examined makes it clear that there is no really authoritative source to which we can turn. The field is not entirely unexplored, but the conclusions reached so far by investigators differ considerably in emphasis and in some instances are contradictory as to the types of work that will have to be done and the types of worker that will have to do it. The explanation may well be that what is true in some sectors of industry, and even in some firms operating in substantially the same sector, may not have the same validity for others. But the main point which we now seek to make is that there is urgent need for systematic and extensive investigation over the whole field of industry and commerce in order to establish an objective basis for informed action.

176. Programmes of education and training must be planned on some basis, and we now set down some points which appear to be generally accepted and which we consider to be helpful in a general way:

(i) Heavy unskilled manual work is steadily declining, thus eliminating some employment opportunities which are now available to untrained workers.

(ii) Many traditional skills will he less commonly needed and in some cases existing skills may well become wholly irrelevant. In the course of his or her working life a man or woman henceforth will commonly have to acquire new skills, which even when acquired, may sometimes be needed for only a few years.

(iii) The reduction in the need for traditional skills will be partly attributahle to increased use of automated processes, and where this occurs there is likely to be a new need for workers of a supervisory type who will require technical knowledge and resource to deal with faults which, if not corrected expeditiously, may prove very costly.

(iv) As mechanisation and automation extend there will be a corresponding increase in the need for the services of skilled operators and of technicians equipped with suitable education and training. There may he, at least in the short term, an increase in the numher of monotonous, repetitive jobs; but there is reason to believe that, instead of being confined to a single repetitive operation, the individual will commonly be responsible for at least a limited range of operations.

(v) As new materials and new processes are introduced, new skills, backed by new technical knowledge and understanding, may commonly be needed.

(vi) Working hours will be steadily reduced, with an accompanying need for means of using in a really satisfying way the increased hours of leisure.

(vii) Change will become an estahlished feature of the normal process of development. In the interests hoth of working efficiency and of human happiness, the education of all who are, or who are to be, engaged in industry and commerce will need to aim at developing resources which will enable them to cope with new situations and new demands and to regard change as a normal, challenging and perhaps not unwelcome aspect of their lives.

Basis for action

177. Nothing that has been said in these paragraphs seems to us to be in any way at variance with the general tenor of our report. We believe very firmly that the developing needs of our economy can be satisfied only through continued education on a broad front, presented more effectively than at present in the ways we have described, and designed not only to improve the technical and specialised preparation and equipment of those who are engaged in industry and commerce but also to increase their adaptahility and to assist their development as persons. It is clear that the static situation in which a young worker on completion of his apprenticeship or learnership could regard himself as, by and large, equipped for the rest of his working life is now part of the historical past. The people who are to operate and to maintain the modern productive equipment which must increasingly become available in industry and commerce must not only have the skills appropriate to this job: they must also he confident of heing ahle to cope with the next lot of skills that will be demanded by the next lot of new materials and new processes as they are developed across the fifty years or so spanned by an ordinary working life. The solution so far sought to meet the new situation has been largely in terms of " make do and mend " measures rather than of an approach based on a fundamental and comprehensive reappraisal of the new and fast-changing circumstances. This was perhaps inevitable in the early stages, since the changes came initially with great and unexpected suddenness. But the initial period is now over and it is

already clear that the speed of change is accelerating. Indeed, it is almost axiomatic to state that plans must in future be geared not only to the crop of changes that is immediately imminent, but also to the subsequent second and perhaps even third crop. In short, a situation must be envisaged in which the new needs for education and training appropriate to an industrial change are, as far as possible, met not after the change has taken place but in advance of it.

178. We have referred at several points to the recent White Paper on Industrial Training. We would hope that the surveys to which we made reference in paragraph 175 and which we regard as essential would be carried out by or on behalf of the Boards which, it is proposed, should be established as part of the new arrangements for training. But questions of the training of young workers and of the re-training of adult workers cannot be divorced from those of the complementary education provided in colleges. Moreover, if our recommendations concerning vocational courses in schools are accepted, changes in the outside world of industry and commerce should, as far as possible, be anticipated in the vocational work done in the schools. *We recommend, therefore, not only that the surveys should be undertaken but also that educational as well as industrial and commercial interests should play a part in them.*

Implications for teachers

179. If the needs for development in industry and commerce are to be suitably matched by development in education, whether in school or in college, it will obviously be essential for teachers to keep abreast of them. This requirement merely re-inforces what we have said in section XI about the need for a fresh outlook on the initial training of teachers, and gives even greater force to our recommendation for a massive expansion of facilities for the further education, and for the re-training from time to time, of teachers in service. Teachers of vocational subjects may well have to alter the whole basis of their teaching to take account of technological developments. As a result of these technological developments, a very considerable number of aids to teaching is already becoming available and it seems certain that this number will rapidly increase. We have already expressed our hope that teachers will be ready and willing to take advantage of these aids, which may well lead, within a relatively short period, to a very significant alteration in the whole conception of teaching, particularly perhaps in colleges of further education but also in secondary schools. We certainly think that, for example, the development of programmed learning and the use of teaching machines should very soon enable the classroom situation to be transformed.

Conclusion

180. We end as we began, with a statement of our faith in the paramount need for the expansion of education on a broad front. This seems to us essential, not only in the interest of the individual, both as a person and as a worker, but even more as a powerful means of assisting the development of our economy. We are more than ever convinced that education in school and in college must be regarded as a continuing process, between the two phases of which there can and should be links of many kinds, as we have shown. Neither phase can be considered as something separate from the needs of the individual in his working life or of the rapidly developing needs of industry and commerce, to which they should be in every way complementary.

181. We may have appeared at times to lay great emphasis on education geared to employment; but we have done so deliberately because we are so conscious of the importance for the maintenance, and the improvement, of our standard of living and for the development of our economy of the fully adequate preparation in both schools and colleges of those who are to serve industry and commerce. This, however, must not be taken to imply that we consider a vocationally-biased education to be the whole of education. Indeed, we have sought at many points in our report to emphasise the essential importance of the individual and the need for both education and training to facilitate his all-round development, within the limits of his abilities, not only for the prosecution of his daily avocation but also so that he may lead a life which will be fully satisfying to himself as a person and fully useful to the community of which he is a member. We believe that the recommendations which we have made in our report will contribute to the ends which we have kept in the forefront of our minds in the course of our lengthy deliberations, and we commend them to the earnest consideration of everyone concerned.

XIII. Summary of the Report

INTRODUCTION

182. We explain our appointment and method of work (paragraphs 1-5).

I. THE SCOPE OF THE PROBLEM

183. We outline the post-war situation in secondary education and in further education and note some reasons why the two have remained dissociated (paragraphs 6-12).

II. THE YOUNG PEOPLE INVOLVED: CHARACTERISTICS, OCCUPATIONS AND EDUCATION

184. We define the group of boys and girls—about 65 per cent. of each age group—with whom we are concerned and describe in a general way their characteristics and attitudes (paragraphs 13-14).

185. Secondary education must be relevant to the needs of the whole range of ability of pupils who are not following certificate courses. The Scottish Education Department's Memorandum, " Junior Secondary Education," published in 1955, gave valuable advice about the aims of secondary education for these pupils and about means of achieving these aims. Progress in implementing the recommendations has been slow and uneven over the country as a whole, although notable advances have been made in some areas. There have, of course, been many obstacles to progress: shortage of staff, difficulties of accommodation, conservatism among teachers trained in the traditional manner, behavioural problems among pupils. We point out the merit of new types of courses which set out to be meaningful and purposeful in the eyes of the pupils (paragraphs 15-21).

186. We describe the great range of employments taken up by young recruits to industry and commerce. Developments in industry and commerce, and the increase in the number of jobs for which a measure of skill and adaptability is required, must bring about changes in both secondary and further education (paragraphs 22-24).

187. We outline recent efforts to increase the numbers of boys and girls taking

courses of further education and emphasise the need for a great extension of day release from industry and commerce. Girls, no less than boys, require day release for further education (paragraphs 25-27).

188. The number of vocational courses at different levels provided in colleges of further education is expanding rapidly and many more courses leading to examinations of bodies such as the City and Guilds of London Institute and the Scottish Council for Commercial Education are now available. Courses of a general nature without specific technical or commercial content and pre-employment courses for a variety of industries are also provided in some colleges (paragraphs 28-33).

189. Many new colleges will soon be opened and courses suitable for different grades of workers are now associated with many occupations. A more general acceptance by employers of the principle of day release is needed if the majority of young workers are to receive further education appropriate to their occupations and abilities (paragraph 34).

190. We outline some of the features of technical training and education in other Western European countries and welcome the prospect of a new approach to industrial training in this country opened up by the presentation to Parliament by the Minister of Labour of the White Paper, " Industrial Training: Government Proposals " (Cmnd. 1892). The planning of industrial training and the associated technical and general education should be a joint enterprise of industry and the educational service (paragraphs 35-38).

III. What industry, commerce and further education ask of the schools

191. We emphasise the importance of sound vocational guidance in schools and mention some reasons for existing deficiencies (paragraph 39).

192. Satisfactory selection of young recruits to industry is of great importance for their progress and happiness as workers and their success in further education. Selection procedures vary very widely and some are much more successful than others. Poor selection by employers gives rise to problems for colleges of further education. Principals of colleges also need to receive better information about pupils from the schools (paragraphs 40-41).

193. Allowing for natural differences in emphasis, there is a broad community of interest between employers and teachers in colleges. They believe that the schools, while ensuring a good level of general education, should relate their courses much more than they do to the future working lives of the pupils. The standard of attainment of pupils who are at or above the present average level is satisfactory; the great need is to raise the level of attainment of the large number who are below the present average level. Complaints about the educational standards of young recruits to industry and to further education are, however, not always justified. Employers need to be really knowledgeable about what it is reasonable to expect of the schools (paragraphs 42-44).

194. We outline the contribution to the education of pupils made by the various subjects of the secondary school curriculum (paragraphs 45-48).

195. Great importance must be attached to the all-round development of young people and to fostering personal qualities and attitudes. Flexibility of outlook and versatility in skill are required nowadays in industry. The needs of the individual, however, go beyond his vocation and the schools have to prepare

pupils not only for working life but also for social and personal life (paragraphs 49-50).

IV. Courses in schools and colleges

196. It is very important to avoid a lengthy interval between pupils leaving school and starting courses of further education. *We recommend that education authorities should co-operate with all concerned in order to make sure that the interval is kept to a minimum* (paragraph 51).

197. The reduction in the number of school leaving dates should help to solve this prohlem. *We recommend that employers should, so far as possible, recruit boys and girls only after they have completed the secondary school courses on which they have embarked* (paragraph 52).

198. *We recommend that, wherever possible, colleges should have more than one admission date per session and that the authorities in the areas from which each college draws its students should arrange common school leaving dates. We recommend also that education authorities should, with the approval of examining bodies, offer special classes to young people recruited to industry in mid-session so that they may complete the first stage of courses by the end of the session.* For this to be effective employers would require to grant for a period some additional day release (paragraph 53).

199. Difficulties are caused by pupils leaving school at the age of fifteen and spending a year in general employment until they can hecome apprenticed at the age of sixteen. Greater advantage would accrue to them if they were to continue full-time education until the age of sixteen. We commend the practice of a few firms which give their young recruits at age fifteen a short period of induction and then send them to a full-time course of general and vocational education (paragraph 54).

200. The weight of the opinion and the evidence that we have heard is substantially in favour of the development in secondary schools of a meaningful incentive for learning that will readily be understood hy boys and girls and their parents. *We believe that the case is unanswerable for the use in schools of the vocational impulse as the core round which the curriculum should be organised.* We describe various views on the ways in which vocational elements should he introduced into secondary education (paragraphs 55-59).

201. The large majority of schools are undertaking no more than a very general approach. In order to make their work more effective they should enlist the co-operation and seek the advice of people in local industry and of teachers in further education. *We recommend that schools should introduce in the third year of secondary education courses providing a broad approach to particular industries* (paragraph 60).

202. We describe a number of courses with a vocational motive which are being provided in schools and colleges and show their value in providing links with courses of further education. Experience shows that the introduction of a vocational motive has favourable effects on the general level of education (paragraphs 61-62).

203. We point out the need for certain safeguards. Courses should not commit pupils prematurely to an education which will unduly limit their choice of occupation. The broad approach to vocations should have general value to

pupils as persons and should not merely be of narrow use to them as workers. The variety of courses to be provided and the number of pupils for which each is to cater should have regard to the vocational opportunities in and around the area. The goodwill and interest of employers should be fostered (paragraphs 63-64).

204. The co-operation and advice of teachers from further education and of employers should be sought in designing and organising courses. Secondary school teachers should emphasise to pupils that their work in school is only a prelude to training in industry and to further education (paragraph 65).

205. We outline the respective claims for extended courses after age fifteen in schools and in colleges of further education. Local circumstances are generally the determining factor in favour of one or the other. We emphasise the need for widespread development of extended courses whether in school or in college (paragraphs 66-69).

206. The full advantages of the co-ordination of extended courses with employment and with further education must be sought in consultation with employers and teachers. Consultation is also required so as to keep the courses up to date (paragraph 70).

207. Education authorities should not wait for a demand for courses to come from local employers but should encourage the development of suitable courses and should seek the support of local employers on the ground of the benefit which the courses convey (paragraph 71).

208. The needs of boys and girls who will seek employment in commerce and in the public service can be met by providing courses of a more general nature (paragraph 72).

209. We commend the action of schools in some areas in seeking to give their pupils preparation for entry into industry and commerce by means of special short courses. *We recommend that this practice should be extended* and that, in addition, firms should provide courses of induction for young employees which might be linked with corresponding courses in schools (paragraph 73).

210. The work of the colleges of further education must be related to the work done in schools. A successful beginning in further education depends largely upon alignment of the early instruction with the students' achievements in the secondary schools. Colleges must be prepared to adapt both courses and teaching so as to take account of differences in ability and in attainment among students. As the effects of new courses in schools become apparent, a comprehensive revision of many courses of vocational further education will become necessary. *We recommend strongly that the bodies which review courses of further education should include in their membership teachers from secondary schools* (paragraph 74).

211. It is sometimes difficult for colleges to make arrangements for students of varying attainment, but possibilities exist of granting remissions of work and exemption from some parts of courses. Students who embark on unsuitable courses should be transferred as quickly as possible to more suitable courses (paragraphs 75-77).

212. Continuation of the general education started in schools is very important as a reinforcement of vocational studies in further education. Young people need not only to consolidate and improve their skill in the use of English but

also to be given guidance in the development of personal attitudes and standards and in determining the interests and activities which they should pursue. Provision is now being made for a small but important element of general studies in vocational courses. All teachers in colleges have a part to play in the general development of students, to which great importance should be attached. *We recommend that the many opportunities in this field of co-ordinating the work done in secondary schools with that attempted in colleges of further education be exploited to the full* (paragraphs 78-86).

V. Content of courses and methods of teaching

213. Effective co-ordination of secondary education with further education requires dovetailing of syllabuses and assimilation of teaching procedures in schools and in colleges. There is great need for consultation between teachers and for encouragement of close contact and regular maintenance of interest (paragraphs 87-88).

214. The content of subject syllabuses in schools should be planned carefully so that in quantity and quality it matches the resources of the pupils. Overcrowded syllabuses should be avoided. Material to be taught should be selected because of its appositeness to the pupils' experience and its present and future usefulness in their daily lives and the contribution it can make to their general development. *We recommend that in all appropriate subjects considerable importance should be attached to practical aspects and to illustrations from the field of employment in the selection of material.* The definite vocational interest which we have advocated should be used to integrate what is taught in school more closely with ensuing courses of further education (paragraphs 89-92).

215. We outline the contribution to co-ordination which can be made by particular subjects of the secondary school curriculum, including those subjects which have no specific vocational content (paragraphs 93-95).

216. The general criteria to be used to determine the content of studies in secondary education are in great measure valid also in further education. Although vocational courses are determined largely by the needs of industry and commerce, teachers in the colleges have much more freedom to plan their courses than is sometimes suggested (paragraph 96).

217. Teaching methods in both schools and colleges must take into account the natural interests and attitudes of pupils and students and differences in their ability, aptitudes, attainment and temperament. Methods of teaching and learning which induce activity and which are related to their interests make young people more self-reliant and enable them to develop sound habits of work. The development of sound qualities of character are the responsibility of all teachers. Young people should be placed in situations which require them to perform tasks calling for the exercise of the qualities it is desired to encourage. Methods of organising classwork should vary according to the nature of what is being done and the ability of the pupils and students (paragraphs 97-100).

218. Teachers in both schools and colleges should endeavour to employ as fully as practicable the very wide range of teaching aids now available (paragraph 101).

219. The methods of teaching recommended may seem to make learning take place at a slower pace, but they are undoubtedly more effective and young people taught by them have a new keenness and interest, they are unwilling to be

passive, and they are ready to take up new interests and activities. These methods also enable knowledge acquired to be more firmly established (paragraph 102).

VI. Informal education

220. We stress the value of informal further education in developing worthwhile interests which are fostered in the schools. Students in colleges of further education should be enabled to continue and develop these interests and also to form new ones. The staff of colleges of further education should make sure that new students, when enrolling, have their attention drawn to the informal facilities offered (paragraphs 103-107).

221. Many young people do not undertake any further education at all and for them the Youth Service can make a very valuable contribution. We support very strongly the efforts of the Standing Consultative Council on Youth Service to build up the service in terms of staff and facilities. We commend also the support and encouragement given by individual firms (paragraph 108).

222. The case for appointing to schools and colleges additional members of staff with a particular responsibility for organising informal activities should be considered. One education authority in Scotland has appointed Youth Service experts to the staffs of its technical colleges. *We recommend that the appointment of staff of this kind should be encouraged* (paragraph 109).

VII. Guidance of pupils

223. Vocational guidance should not be postponed until the later stages of school courses; it should start about the beginning of the second year and pupils should be led gradually to acquire a background of knowledge which will enable them to make sensible decisions about their future occupations. A more extensive and systematic use of existing sources of information about careers should be planned (paragraphs 110-113).

224. Every teacher has a part to play in the guidance of pupils. In addition, one teacher in relation to each class (the form teacher) should possess a very extensive knowledge of the educational progress, the general health, the home circumstances, and the special personal problems or difficulties of each pupil (paragraph 114).

225. Vocational guidance is too highly skilled and specialised a matter to be left entirely to form teachers. Education authorities should provide such staff as is necessary, either by expansion of the Youth Employment Service or by the appointment of careers masters and mistresses (paragraphs 115-116).

226. The overall responsibility for the programme of vocational guidance in each school should be the responsibility of the headmaster, who should allocate particular responsibilities after consultation with his staff and with the youth employment officer (paragraphs 117-118).

227. We emphasise the importance of securing the co-operation of parents. Development of suitable courses in schools should increase their interest in the future training and further education of their children (paragraph 119).

228. The information about boys and girls supplied to principals of colleges is inadequate and needs to be improved. We describe the type of information which might be included in a suitable school leaving report, covering not only attainment in school but also physical attributes and personal qualities. *We suggest a form of school leaving report and recommend that all education authorities should adopt a report of this kind* (paragraphs 120-124).

229. The information supplied to youth employment officers on Form Y 15 is often found to be inadequate. We suggest that the proposed new school leaving report might eventually be used also by the Youth Employment Service in place of Form Y 15 (paragraph 125).

230. There appears to us to be a good case for reconsideration of the form of the Pupil's Progress Record and we hope that when this record is reviewed the requirements of the proposed new school leaving report will be given due consideration (paragraph 126).

231. Representatives of industry, commerce and further education, when they are recruiting young people, should take full advantage of the information available from school reports. When boys and girls are being selected for pre-employment courses there should be no need for colleges to set special entrance tests if they make full use of the school leaving report (paragraph 127).

232. Employers should follow similar selection procedures and collaborate closely with the schools, the colleges and the Youth Employment Service in order to build up a satisfactory system of transfer of young people from school to employment and further education (paragraph 128).

VIII. Examinations

233. Views about the part which examinations and certificates should play in the co-ordination of secondary with further education are very divergent. The practices of education authorities in the organisation of examinations at age fifteen vary very widely (paragraphs 129-130).

234. Internal examinations in schools have a useful part to play in the assessment of pupils and in the teaching process. Examinations tend at present, however, to follow too closely the pattern and type of examinations traditionally associated with the Scottish Leaving Certificate. We strongly recommend that experiment and research be undertaken to devise tests which are in keeping with the methods of teaching and learning which we have advocated and which may be put into operation without undue difficulty (paragraphs 131-132).

235. Many headmasters and teachers are strongly in favour of local external examinations for their stimulating effect on pupils and teachers. Others think that the pre-occupation with external examinations tends to distort the curriculum. We believe that pupils can be stimulated by courses with a real vocational motive without the complication of external examinations (paragraphs 133-135).

236. An external examination at national level for pupils who leave school at the end of three-year secondary courses would go far beyond any need for a common measure of assessment of pupils at this level. *We recommend that there should be no external examination at national level for pupils at the end of three-year secondary school courses* (paragraph 136).

237. Other types of external examination may influence the transfer of pupils from secondary schools to further education and employment. Certificates awarded by independent examining bodies and external examinations in local areas based on common syllabuses and common papers affect only a small number of abler pupils. Internal examinations set and marked within individual schools but controlled by some form of external assessment may have certain advantages over wholly external examinations (paragraph 137).

238. *We recommend that education authorities should make definite efforts to obtain evidence of the usefulness of external examinations at local level and of their effect on the co-ordination of secondary education with further education* (paragraphs 138-139).

239. We consider also the question of an external examination at the end of four-year courses and *recommend that, for the present, there should be no national examination at a level below that of the Scottish Certificate of Education for pupils aged sixteen.* The question might, however, be reconsidered at a later date (paragraph 140).

240. We review the recommendation of the Pre-Apprenticeship Courses Committee of the Scottish Technical Education Consultative Council that a nationally recognised certificate which could be issued on a local basis should be given to all students who have satisfactorily completed a pre-apprenticeship course. We believe that a certificate of this kind is not necessary, but we would not oppose its issue if it is really desired (paragraph 141).

IX. The less able

241. We review the special educational problems created by the substantial number of less able boys and girls in the schools and their employment needs (paragraphs 142-145).

242. The range of work undertaken by the less able extends from almost totally unskilled occupations to those which demand skill and knowledge approaching those of a craftsman. Very little training or further education are provided at present for these young workers. Firms which do provide suitable training are, however, obtaining significant advantages from it (paragraphs 146-147).

243. The aim of the schools should be to provide these pupils, within the limits of their capacity, with as good a general education as possible. This aim is often not realised, despite the successful efforts of some teachers. Subjects should not be presented to them in isolation, teaching should be related strictly to their abilities, and as high a standard as possible should be demanded in all work really within their compass. The vocational interest is as strong among less able pupils as among other boys and girls, but it should be developed in a different way and at a different level. Secondary school courses with a vocational motive but specially designed for this group are as appropriate for them as for abler pupils (paragraphs 148-151).

244. We view with concern the lack of provision of further education for the less able. Many occupations below the level of " skilled " have a specific technical content and background which provide a basis for an interesting and vocationally relevant part-time course of further education. We note with interest the development of " operatives' courses " by the City and Guilds of London Institute. These courses can go a long way towards satisfying the needs both of young workers and of their employers. *We strongly recommend the more widespread use of operatives' courses by firms and industry and an expansion of such provision wherever possible to cover a much wider range of occupations at this level* (paragraphs 152-153).

245. For a proportion of the less able, however, vocationally centred courses would be inappropriate and further education must aim at their general

development as persons. We note the success already achieved by certain colleges in providing general courses for less able students. Courses for the less able should, so far as possible, be provided in the same colleges as cater for abler students (paragraph 154).

246. An important link between secondary education and further education for the less able can be forged through informal and cultural activities. *We strongly recommend that schools, colleges and employers should encourage less able young people to join youth clubs or other organisations which cater for particular interests* (paragraph 155).

247. If there is to be widespread development in the field of general education, a systematic approach is necessary, possibly based on initial pilot schemes in a few areas. In co-operation with the managements of firms, education authorities might experiment with courses designed for these young workers, and local youth organisations might try to provide for their social and recreational needs. The various local efforts might be initiated and co-ordinated as part of a national experiment. *We recommend that a scheme on these lines should be put into operation and that after a period it should be carefully appraised and the results published* (paragraph 156).

X. Machinery for achieving co-ordination

248. A definite framework of arrangements is necessary. Efforts made so far to encourage the development of a close relationship between schools and further education establishments have not been very satisfactory. *We strongly recommend that education authorities should be asked to review the relevant machinery in their areas and to make sure that it is capable of dealing with the many aspects of co-ordination; and further, that after a time they should be given an opportunity of reporting to the Secretary of State the nature and the efficacy of their arrangements* (paragraph 157).

249. We stress the great importance of meetings and consultation between heads of schools and of colleges and between members of their staffs (paragraph 158).

250. Governing bodies comprising representatives of the education authority, of local industry and commerce, of further education and of secondary education could, in our opinion, exercise an important co-ordinating influence in the fields of education with which we are concerned. Bodies such as youth employment committees or local trade advisory committees could also do useful work if they were encouraged to deal with appropriate aspects of co-ordination (paragraphs 159-160).

251. The schools should make greater efforts to meet and to consult employers and their representatives in order to reduce the ignorance which at present exists among teachers and employers of each other's field of activity (paragraph 161).

XI. Staffing

252. The developments proposed will require strengthening of the staffing of both schools and colleges and may add to the difficulties which are already being experienced because of the shortage of teachers. *We earnestly hope, however, that all the necessary changes in courses will not be postponed because all the staff that appears to be necessary is not immediately available* (paragraphs 162-163).

253. The rapid expansion of further education will require more teachers and also teachers with new types of qualifications. It may be necessary to encourage some sharing of staff between colleges of further education and the secondary schools which feed them (paragraphs 164-165).

254. It is very important that headteachers, college principals and their staffs should be freed from unnecessary clerical duties in order to attend to their essential educational responsibilities. *We strongly recommend that education authorities should review their existing arrangements for the provision of clerical assistance and should make sure that schools and colleges receive all the assistance in terms both of amount and of quality that they need* (paragraph 166).

255. We emphasise the need for change in the outlook of teachers and in their approach to their work with pupils and students. The colleges of education will have to meet this need by providing appropriate courses for all categories of teachers (paragraph 167).

256. We outline the alterations which appear to us necessary in the initial training of teachers for work with secondary school pupils who are following non-certificate courses. The colleges of education are hampered by the requirements of the existing Regulations for the Training of Teachers. *We strongly recommend that the Regulations should be suitably amended as soon as possible* (paragraphs 168-169).

257. We note with pleasure the introduction of a new pre-service and in-service course of professional training for teachers in further education (paragraph 170).

258. We note the strength of the plea from teachers for the provision of courses for serving teachers in order to *cater* for the widespread developments in education. *We strongly recommend that machinery should be established to enable the colleges of education, in association with education authorities and with all the people in the educational world who are capable of giving help, to determine needs and to provide all the courses that are required.* We hope that education authorities will increasingly be willing to facilitate, if necessary during the working session, the attendance of teachers at appropriate courses (paragraph 171).

XII. Looking ahead

259. The Government have accepted in principle the desirability of extending the period of compulsory full-time education, but have as yet been unable to state any date on which the extension might become operative. We consider that the provision at an early date of a large variety of vocationally-centred courses is an essential preparation for this development (paragraph 172).

260. It appears likely that the introduction of compulsory part-time education until the age of eighteen will not take place for some time. We believe that it would be desirable as a first step to require young people to remain in organised full-time education until age sixteen either in school or in college. The recommendations which we have made regarding further education should assist preparations for the day when compulsory part-time attendance until the age of eighteen will be introduced (paragraph 173).

261. We review the rapid changes which are taking place in industrial practices based on technological developments and reflected in changes in techniques in

factories, offices and warehouses. These changes bave for the preparation of workers and for tbe types of work tbat they will have to do implications which are as yet not adequately known. We urge the need for systematic and extensive investigation of this matter over the whole field of industry and commerce in order to establish an objective basis for informed action (paragraphs 174-175).

262. Those in, or entering, industry and commerce will require to be properly prepared for rapidly cbanging circumstances through continued education and greatly diversified training. Questions of the training of young workers and of the re-training of adult workers will have to be considered along witb those of the complementary education provided in colleges. Changes in the world of industry and commerce should be anticipated in the vocational work done botb in scbools and in colleges. *We recommend that surveys of the needs should be undertaken and that educational as well as industrial and commercial interests should play a part in them* (paragraphs 176-178).

263. Teachers will require to keep abreast of developments in industry and commerce. We re-empbasise the need for a fresh outlook on the initial training of teachers and for the provision of courses for teacbers in service. Technological developments will lead also to expansion in the number of teaching aids and advantage should be taken of these aids as they become available (paragraph 179).

264. Education in school and in college is a continuing process. The two phases must be closely linked, and both should be complementary to the rapidly expanding needs of industry and commerce. Education geared to employment is of great importance; but it is not the wbole of education, and we re-emphasise our belief in tbe essential importance of the individual and the need for both education and training to facilitate his all-round development (paragraphs 180-181).

ACKNOWLEDGMENT

265. We cannot end without expressing our gratitude to our Secretary, Mr. W. Mitchell, whose remarkable industry has earned our constant admiration and whose assistance has been invaluable at all stages of our work and in the drafting of our report. Our Assistant Secretary, Mr. J. W. Sinclair, has also been untiring in his efforts to help us and we would express to him also our warm tbanks for all that he has done on our behalf.

We are, Sir,

Your obedient Servants,

J. S. BRUNTON
(*Chairman*)

G. N. RENNIE
(*Vice-Chairman*)

On behalf of the Working Party.

April, 1963

APPENDICES

SOME FULL-TIME COURSES IN SCHOOLS AND COLLEGES WHICH HAVE CLEARLY-DEFINED VOCATIONAL ELEMENTS

(Paragraph 61 of Report)

The courses outlined in this Appendix are representative of courses which are to he found in a number of schools and colleges in different parts of the country.

A. Third-year secondary school courses

(i) *Engineering*

Boys in a secondary school in one city who are not following certificate courses are given in their third year a choice of course from engineering, huilding or elementary seamanship. The course in engineering is described briefly in the following paragraphs. Provision is made for extension of the course into a fourth year.

Forty periods of instruction weekly are allocated as follows: English, history and geography 8 periods; mathematics 5; science 4; art and music 3; physical education 2; religious education 2; technical suhjects (including woodwork, metalwork, related theory and practice, workshop calculations and technical drawing) 16.

The *technical studies* include the function and correct use of common engineering materials, hand tools and machines; hasic foundry practice and casting; and, to demonstrate the co-ordination of the various skills, the construction of simple units and their assemhly into finished products. Appropriate calculations and short reports related to the practical activities are included in the work. Much of the course is motivated and integrated hy study of the internal comhustion engine. Instruction and practice are given in the dismantling and re-assemhly of an engine, and in its care and maintenance, and the principles involved in the generation of power, the transmission system and the construction of a chassis of a motor car are studied. The boys are suitably dressed for activities in the workshop; this adds realism and gives life-size proportions to their work.

In *English*, due attention is given to general reading; hut the hoys are also encouraged to appreciate the relevance of their studies to their practical work and considerahle stress is laid on training them to give, orally or in writing, descriptions of, for example, engineering processes, engineering tools or articles which they have made, and on the reading and interpretation of simple articles with a hearing on practical matters. Use is made in *history and geography* of the central theme of the course through, for example, the discussion of great engineering projects and the development of the petrol and other engines and their impact on the life of the community.

Close co-operation between the *mathematics* department and the *technical* department ensures that calculations and the use of formulae which are relevant to engineering are given due attention; some mathematics is taught in the workshops. The general course in *science* is related to its practical applications, especially engineering applications such as the properties of metals, the rusting of metals and its prevention, the transfer of heat and the chemistry of blast furnaces.

Useful contacts have been established with local employers in the engineering industry, who send representatives to the school from time to time and invite parties of boys to visit their works.

(ii) *Building*

The following course in building is offered in the third year of a secondary school in another city to certain boys in non-certificate courses. Forty weekly periods of instruction are allocated as follows: English, history and geography 8 periods; art and music 4; religious education 1; physical education 4; mathematics 5; science 4; technical subjects (including technical drawing, technology and practical brickwork, carpentry and joinery, plumbing and painting) 14.

The *craft elements* of the course are planned, in consultation with teachers from a local college of further education, on a broad basis designed to prepare boys for direct entry to the second-year stage of part-time courses of further education leading to craft certificates of the City and Guilds of London Institute in brickwork, carpentry and joinery, plumbing or painting. The practical work is carried out in the local college of further education and includes exercises and detailed work in all four crafts. To show the inter-relation of the four crafts in building construction, the course culminates in a realistic project, such as the construction of a unit incorporating brick walls, doors, windows, a plumbing system and interior decoration.

The work in *mathematics* deals largely with craft calculations involved in, for example, costs and price-checking, waste, and measuring of surfaces and volumes commonly encountered in craft work; symbols, formulae and graphs are introduced in a simple way through realistic examples from building practice. The course in *science* is essentially practical and has among its sources the properties of building materials, domestic water supplies, the causes and prevention of damp, the effects of temperature changes and heat on building components and structures, and mechanical aids such as lifting tackle.

In *English*, the pupils are encouraged to develop fluency in speaking through participation in class discussions, mock interviews and short individual talks. They also practise the writing of short simple technical reports, personal and business letters and the summarising of reports and descriptive passages. In *history and geography* much of the interest stems from the central theme of building through such topics as the development of building design, the growth of crafts and trade unionism and the sources, manufacture and transport of raw materials used in building construction.

The work in *art* includes a simple study of architecture, lettering and sign-writing.

(iii) *Retail distribution*

Certain girls in the third year of another city secondary school follow a course in retail distribution, of which an outline is given below.

The forty weekly periods of secular instruction are allocated as follows: English and social studies 11 periods; speech training 5; science 4; book-keeping and arithmetic 6; shop practice and salesmanship 4; art 4; homecraft 4; physical education 2.

Instruction in *shop practice and salesmanship* is given by a part-time specialist teacher from the staff of a college of further education. Special equipment and materials such as shop counters, display units and a variety of shop goods have been provided. Shop practice includes such matters as the different types of

organisation found in the retail trade, typical business transactions connected with shops and stores, rules essential to the smooth running of a shop, management of stock and the care of supplies. Lessons are given in such topics as the personal qualities desirable in a saleswoman, the knowledge of merchandise which she should possess, her relations with her customers and the making of a sale. Regular and frequent demonstrations of the art of selling are followed by discussion and practice.

Arithmetic and *book-keeping* are concerned mainly with calculations, invoices and accounts connected with the retail trade, but the skills and principles involved are also practised in connection with such general matters as personal wages, hours of work and private budgeting.

In *English* much of the time is devoted to oral work in order to develop poise and self confidence. The preparation and delivery of short talks, debates and discussions on current affairs, and participation in conversation and in interviews are encouraged. In written work much attention is given to correspondence —both personal and business—and to correction of common grammatical and spelling errors. Reading is encouraged through the use of the school library. *Speech training* concentrates on critical listening by the girls to their own voices with the aid of the tape recorder, and discussion of the factors which promote pleasant speech is allied to practice in selling commodities and to interviews of various kinds.

Social studies are planned round life in Britain today, leading in the later stages to the theme of responsible citizenship. Visits are made to public undertakings, such as the telephone exchange, and to factories producing commodities sold in retail shops. Visiting lecturers, chiefly specialists in health and personal hygiene, give talks to the girls.

Science is based largely on themes closely related to the everyday lives of the girls. It includes such matters as human physiology, simple household electricity, foodstuffs, food hygiene and the preservation of food, hard and soft waters, soaps, detergents and whitening agents, and an introduction to textiles.

The work of the *art* department is also centred largely on retail distribution. Lessons on colour, design, lighting, lettering and display are based on their applications to the retail trade. The girls are instructed in the principles of display and are given opportunities to create their own displays to suit the available merchandise, shop counters and display units. In *craft work*, suitable show cards and models for display are made. In the summer term floral decoration is taught by a teacher of horticulture, using material grown in the school garden or greenhouse.

The course in *homecraft* is a general one which might be found in any school of a similar kind. It includes personal relations with others, personal hygiene, deportment, grooming and dress, all of which have a close relevance to salesmanship. The course also offers the girls the opportunity to observe merchandise and salesmanship from the point of view of the customer rather than the saleswoman.

The content of the course, the pattern of the time-table and the choice of technical equipment were decided by the secondary school teachers concerned after consultation with members of the staff of the local college of further education. In consequence, for those pupils who become employed in retail distribution, the course in school leads naturally into the relevant courses in further education. It has real value also for those who find other types of employment, in that it makes an important contribution to their general

education. The course receives strong support from local retail firms, who co-operate with the school by providing suitable material for display purposes or by offering facilities to enable girls to spend short periods observing the activities in a large department store or practising salesmanship in real-life situations.

(iv) *Nautical subjects*

At a small seaboard secondary school in the north-east of Scotland, boys who are keenly interested in the sea may follow a three-year course in nautical subjects which takes them beyond the stage at which related courses of further education begin. The course is, however, conceived as one of general education which makes full use of environmental interests, and the specialised vocational elements are regarded by the school as providing a means to an end and not as an end in themselves.

The curriculum and the normal weekly allocation of the forty periods of instruction are: English, history and geography 12 periods; mathematics and arithmetic 7; science 4; nautical subjects (navigation, seamanship, seacrafts) 8; benchwork 3; art and music 3; physical education 2; religious education 1.

From the beginning the course is designed with nautical subjects as the central theme, which interacts on the other subjects; detailed correlation of the central theme with the other subjects is the result of careful planning. In the third year mathematics and navigation are virtually integrated; at this stage the actual co-ordination of other subjects with the central theme is greater in the case of some subjects than of others.

The individual subjects of the course are not rigidly compartmented; for example, where appropriate, work may be interchanged between nautical subjects and mathematics, or between science and benchwork. The time-table is flexible. For example, at the beginning of the first year pupils concentrate on the new subjects and relatively little attention is devoted to the three R's as such. In better weather all the periods of nautical subjects may be used for practical boatwork—the school possesses a 26-foot cutter equipped with sails and oars—while in winter more time is devoted to theory. In the third year the time-table is adapted to permit the inclusion of some instruction in cookery. The course culminates in a ten-day training cruise in a borrowed fishing vessel in which the boys take over, under supervision, the whole range of duties of the crew from skipper down and apply under real-life conditions the knowledge and skills acquired during the course.

The school has formed close ties with two further education establishments to which it sends abler pupils for pre-employment courses. In selecting students, the receiving colleges give considerable weight to the assessments of individual pupils made by the school.

(v) *Agriculture, horticulture and forestry*

Courses with a rural bias centred on rural science are provided in a school established in a former country mansion house, which has available a walled garden, a large area under glass and a limited area of arable land. Each year the school enrols some forty boys about the age of twelve who come from surrounding farms, villages and, occasionally, towns, and who have a deep interest in country life. About a third of the boys are resident.

In the third year, forty periods of instruction weekly are allocated as follows: English, history and geography 11 periods; mathematics 4; rural science

(including agriculture, horticulture and forestry) 10; technical subjects (including woodwork, metalwork and mechanics) 8; art and music 3; physical education 2; religious education 2.

The more directly vocational subjects are presented through a blend of practical activities in the field, the workshop and the laboratory and of associated study in the classroom. Projects include the testing of fertilisers, the construction of gates in wood or metal, fencing, ploughing, the repair and maintenance of machinery and implements and simple forestry. The work in other classroom subjects is related, when appropriate, to the vocational themes of the course; returns and orders for supplies are made up, letters of various kinds are written, and farming topics are sometimes used in written composition, in reading and in classroom lectures and debates; " patch " studies are made of agricultural developments in Scotland and England; the specialised types of farming in the surrounding area are related to the various type of agricultural land and conditions found in the county; fields are surveyed, silos and stacks are measured and subsequent calculations made, projects are costed and farm rates are calculated. The course in mechanics deals with both general topics and particular applications to machinery and implements.

Relations with local rural industry are of the friendliest; farming friends provide tractors, reapers and other implements on permanent or temporary loan. Visits are also paid by groups of pupils who come to observe particularly interesting and progressive features of farming.

In addition to the various projects carried out in the normal course of the day's work, the boys who are resident in the school participate in the buying, rearing and selling of poultry, pigs, sheep and cattle.

Boys who complete the course readily obtain employment in farming—many are farmers' sons—in market gardening, in town parks departments, in forestry or in agricultural engineering through the school and Youth Employment Service or by their own efforts. Further education in this sphere has been slow to develop and, as yet, there are no close links between the course in school and corresponding courses in further education. A course in agriculture which was started recently in a local college now provides, however, an opportunity to co-ordinate the work in the later stages of the school course with the earlier stages of further education.

B. A FOURTH-YEAR EXTENDED SCHOOL COURSE

Engineering and building

Four secondary schools in a county in central Scotland offer intensive courses in technical subjects to pupils in fourth-year classes who do not follow courses leading to the Scottish Certificate of Education. The curriculum and the weekly allocation of periods are as follows: English, history and geography 7 periods; music and physical education 3; mathematics 6; science 6; industrial art 4; technical subjects (woodwork, metalwork, building drawing, engineering drawing, mechanics) 14.

The aim of the course is to cover the first year stages of courses No. 80, Carpentry and Joinery, and No. 193, Mechanical Engineering Craft Practice, of the City and Guilds of London Institute, and the syllabuses in technical subjects, mathematics and science are planned accordingly. At the end of the course pupils take examinations in the subjects of course No. 80 or of course No. 193. The examination papers are set by teachers from the local college

of further education in consultation with teachers from the secondary schools concerned. Successful candidates are awarded a certificate which enahles them to enter the second year stage of the appropriate course in the local college of further education. In addition, the most successful pupils on the engineering side of the course may take a special examination at a higher level; those who achieve a high enough standard in it have their certificates suitahly endorsed and are enahled to enter directly the first stage of the Mechanical Engineering Technician course (No. 293) of the City and Guilds of London Institute.

The course in *mathematics* is concerned mainly with the application of arithmetic to huilding and engineering prohlems; some practice in the construction and use of formulae is given to the abler pupils. In *science*, hydrostatics, chemistry, heat, electricity and the properties of air and water are studied in relation to building and engineering. *Industrial art* includes the drawing of tools and machinery, colour and decorative art, the use of contemporary materials in huilding construction, model making and the design of common appliances and equipment in relation to their function and to their appearance in their normal surroundings.

The course in *English* is wide in scope, general in aim and contemporary in many of its sources. Attention is given to the writing of exact definitions of technical terms and to methodical descriptions of tools, machines and technical processes. *History and geography* include such topics as the sources, uses and values of huilding and engineering materials and power, industrial organisation, the trade unions, wages, prices, and profits.

C. Pre-employment courses in further education

(i) *Engineering*

On certain dates each year, which are arranged to suit the local school leaving dates, a city college enrols selected boys over the age of fifteen in a full-time one-year pre-apprenticeship course in engineering. Students are selected for the course hy a procedure which includes an interview, a medical examination and the consideration of school reports on the educational attainment, regularity of attendance at school, intelligence quotient and personal qualities of each candidate. Studies are organised at three levels which relate to suhsequent basic craft, technician and National Certificate courses. Students whose progress indicates that their original placing is unsuitable are transferred as soon as possible to a course at an appropriate level.

Out of the 32½ hours of instruction each week, a total of eighteen hours is allocated to trade subjects—2¼ hours each to fitting, machine tools, pattern-making, moulding, sheet metal work, welding, electrical work and automobile work. Four and a half hours are allocated from the remaining 14½ hours to English and social studies and 2½ hours each to science, mathematics, technical drawing and physical education.

Instruction in the *trade subjects* aims at providing the students with some knowledge of each trade, with a broad picture of the engineering industry and with an understanding of the relationship and interdependence of the various trades. Limited projects which involve one or two trades are undertaken by the students.

The course in *English* and *social studies* is hroad and general in approach; in order to meet the more probable vocational needs of workers in engineering

attention is given to engineering terms and to the writing of short reports and summaries and to their interpretation.

Mathematics and *science* are studied largely through appropriate engineering applications.

The course is supported by both sides of the local engineering industry and, in normal circumstances, every boy who completed a course successfully is placed in suitable employment within a short period. Successful completion of a course also leads to the direct entry of a student into the first year of a technician's course or the second year of a basic craft course, whichever is appropriate.

(ii) *Catering and baking*

Twice yearly eighteen boys or girls who are over the age of fifteen and who wish to take up employment in catering or baking are enrolled at another college in an appropriate full-time pre-employment course. Students are selected from the large number of applicants on the basis of the information given in school reports, headmasters' recommendations and the results of interviews carried out by the college principal, the youth employment officer and the county catering organiser.

The curriculum and the allocation of the fifty periods of instruction weekly are as follows: English 7 periods; arithmetic and book-keeping 3; science 4; physical education 2; theory and practice of cookery 19; theory and practice of baking 13; serving and waiting 2.

The vocational elements are planned so as to enable students to gain exemption from the first year of the Catering Trades Basic Training Course (No. 150) of the City and Guilds of London Institute.

The course in *English* is planned to lead, after a second year of study, to presentation on the ordinary grade of the Scottish Certificate of Education. *Arithmetic* and *book-keeping* deal with trade calculations, simple accounts and the use of banking facilities. In addition to *general science* with appropriate applications to catering and baking, the girls are given special instruction in electricity in the home.

The course is supported strongly by local employers. Successful students readily find suitable employment and are granted remission of one year of apprenticeship.

(iii) *Hairdressing*

Another city college offers a full-time pre-apprenticeship course in hairdressing to boys and girls who leave school at the age of fifteen with the intention of becoming apprentices in hairdressing. The number of applicants is far in excess of the number of places, and candidates are selected on the basis of their headmasters' reports, the results of a college entrance test and an interview before a board of trade representatives.

The curriculum and the allocation of forty periods weekly are as follows: English 3 periods; social studies and commerce 2; arithmetic 2; science 4; hygiene and physiology 4; art 4; physical education 3; hairdressing (boardwork and saloon work) 18.

Hairdressing, hygiene, physiology, science and art are based on the syllabuses of the corresponding elements of the part-time course in Hairdressing (No. 124) of the City and Guilds of London Institute. Students from the full-time course

are able to study the vocational elements in much greater width and depth than is possible in a part-time course. For example, a substantial amount of general chemistry is included in *science*, and in *art* time is found for the students to work in a variety of media, to make studies from life and to do some lettering and three-dimensional modelling.

Courses in *English* and *social studies* are of a general nature but technical vocabulary, technical publications, safety regulations, trade union affairs and the techniques of interviewing and receiving clients are studied.

Successful students are not granted any specific remission of apprenticeship but are enabled to enter directly into the second-year stage of the City and Guilds of London Institute course No. 124.

APPENDIX 2

A Possible School Leaving Report
(Paragraph 124 of Report)

CONFIDENTIAL

..... EDUCATION COMMITTEE

..... SCHOOL

SCHOOL LEAVING REPORT

Pupil's Name ..... Date of Birth .....

Address .....

Parent/Guardian .....

SECONDARY EDUCATION

Date of Starting ..... Date of Leaving .....

Nature of Course ..... Pupil's Final Year/Class .....

Number of Classes in Pupil's Final Year .....

Number of S.C.E. Classes in Pupil's Final Year .....

EDUCATIONAL ATTAINMENT (See note 1 on back of form)

A—Well Above Median of Class B—Above Median
C—Below Median D—Well Below Median

Subject	Years	Grade	Subject	Years	Grade	Subject	Years	Grade.
English: Oral			Science			Homecraft		
English: Written			Chemistry					
History			Physics					
Geography			Biology					
French						Tech. Drawing		
Latin			Art			Woodwork		
			Music			Metalwork		
			Physical Educn.			App. Mechanics		
Arithmetic			Typing					
Mathematics			Shorthand					

CERTIFICATES AND AWARDS.....

.....

.....

GRADE OF FURTHER EDUCATION COURSE RECOMMENDED (See note 2) .....

.....

PERSONAL QUALITIES

Appearance and manner

Attitude to and capacity for work

Relations with contemporaries and others

General disposition

General health and vitality

Nature of any important disability

Record of attendance

Membership of school societies

Membership of voluntary organisations

Other noteworthy interests

Marked bias in aptitudes

VOCATIONAL INTENTION OF PUPIL .....

.....

OTHER POINTS OF NOTE AND SUMMING-UP .....

.....

.....

.....HEADMASTER .....DATE

NOTES

Note 1. In the case of subjects not studied throughout the pupil's secondary course, the actual years (e.g. S3, 4) should be indicated and the assessment of attainment should relate to the final year of study of the subject.

Note 2.

Grade of Further Education Course Recommended

Indicate which of the following grades is most appropriate and, where possible, make a more specific recommendation.

1. Course leading to a university degree, associateship or diploma of a central institution, diploma of a college of education or a Higher National Diploma.
2. Course with entrance requirements in terms of S.C.E. Ordinary Grade passes, e.g., course leading to (Ordinary) National Diploma, Senior Commercial Certificate, National Certificate, Hotel and Catering Institute Certificate.
3. Course suitable for ablest non-Certificate pupils, e.g., technician's course, clerk-typist or shorthand-typist course, course leading to Scottish Certificate of Office Studies.
4. Course suitable for pupils with a practical outlook, likely to find employment in jobs involving an appreciable measure of craft or other skills, e.g., craft course in agriculture, building, catering, engineering or hairdressing, course for enrolled nurses, retail distribution course.
5. Course suitable for pupils likely to be successful in, at most, semi-skilled jobs, e.g., general course for young factory workers, City and Guilds of London Institute course for operatives.

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